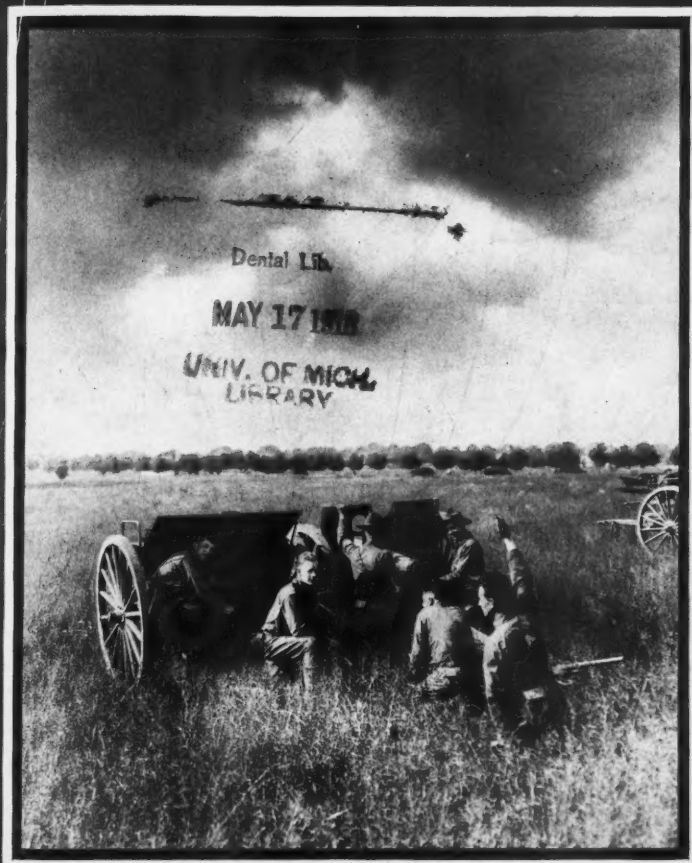


THE DENTAL DIGEST



FEBRUARY 1918

VOL. XXIV, NO. 2

EDITED BY

GEORGE WOOD CLAPP, D.D.S.

PUBLISHED BY

THE DENTISTS' SUPPLY CO.

CANDLER BLDG. TIMES SQUARE
220 WEST 42ND ST. NEW YORK



THE scientific accuracy and practical suitability of Trubyte teeth have been enthusiastically recognized by dentists all over the world.

Outside of North and South America Trubyte teeth are sold under the name

Anatoform Teeth

and everything published about Trubyte teeth applies with equal force to Anatoform Teeth.

Anatoform teeth are sold by de Trey & Co., Ltd., at London, Paris, Melbourne and Petrograd and through them by dealers throughout the eastern hemisphere. Address all inquiries from every country outside of North and South America to de Trey & Co., Ltd., London, or nearest branch.

THE DENTAL DIGEST

Vol. XXIV

FEBRUARY, 1918

No. 2

RESTORATION OF ABNORMAL MOUTHS BY SURGICAL TREATMENT BEFORE INSERTING PLATES

J. P. RUYL, D.D.S., NEW YORK CITY

The abnormalities which occur in front teeth in their relation to the upper and lower jaws have, heretofore, not been regarded by the general practitioner, or, if regarded at all, considered merely as something unpleasant to be patiently borne, because beyond correction. Dentists have not generally approached these cases with the idea of preparing a mouth for the purpose of reconstructing it. That it is possible to so reconstruct the mouth in order to get the proper alignment of artificial teeth, I will endeavor to show by the series of pictures which follows.

There are four conditions arising from these abnormalities and they must all be treated surgically.

The first, and most common, and one of the most difficult to rectify unless properly done, is that condition which is brought about by the patient having only six or eight natural lower anterior teeth—bicusps and molars being gone—and wearing an upper plate for years. In the endeavor to reach for food while chewing, these lower natural teeth have gradually become loosened and elongated, and there has been a marked forward movement of the process and of the teeth, with a consequent protrusion of the lower lip and the appearance of a protruding lower jaw. In cases of this kind the process must be removed anywhere from an eighth to a quarter of an inch.

Next, there is the abnormality due to a natural condition where the gums are long and the lips are short. In order to fit a plate for a mouth of this kind and have it look well, it is necessary to remove a certain portion of the bony tissue to a point where the gingival margin of the artificial teeth will not show under ordinary lip movement. To fit such a mouth without the removal of tissue, teeth without rubber over the ridge would have to be inserted.

The third abnormal condition, due to irregularities, is a pointed arch where the teeth slant forward, and where too many teeth are lost and



Fig. 1. Woman of 34 years having six anterior teeth in each jaw, with a marked protrusion, and showing her gums during ordinary lip movement. There was an accentuated migration of these teeth and enlargement of the process, due to continued mastication on these front teeth.

regulating could not be done. It is often only necessary to remove the outer plate of bone in order to produce the proper lip restoration.

The fourth abnormal condition is the one where the plates have been worn for many years, and where the process has entirely absorbed leav-

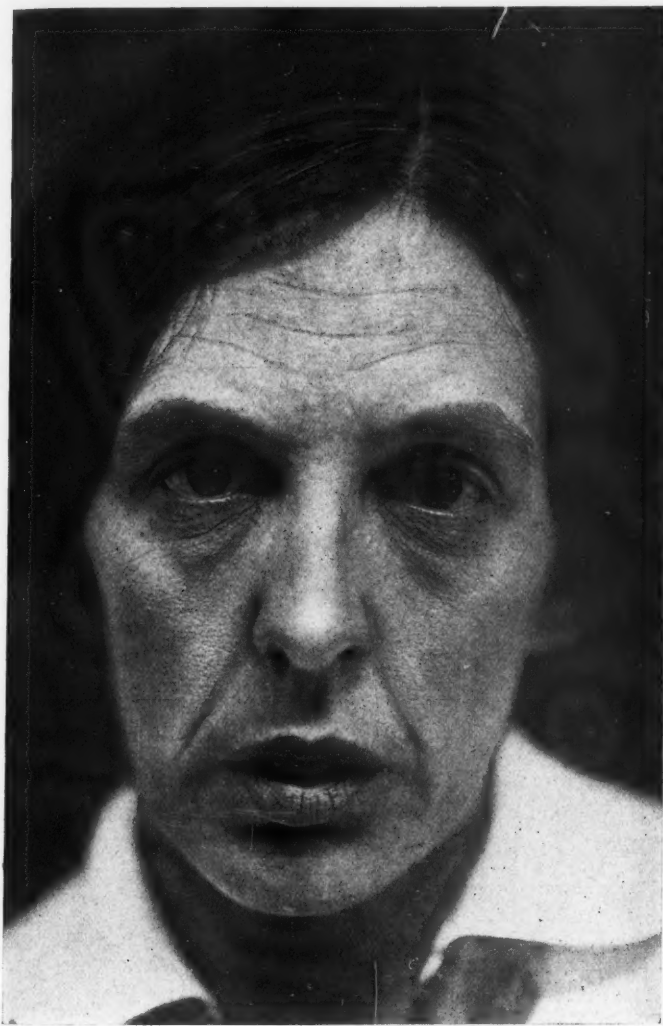


Fig. 2. Front view of the same face. Note lower lip and the general sagging of the tissues

ing a flabby ridge. Here the tissues should be removed down to the bone in order to get more stability to the plate.

Case 1. Mrs. K. presented a history dating from early childhood which was little short of a tragedy. Irregular prominent teeth and the resulting deformity caused her to be very sensitive about her appearance and she practically exiled herself from her associates.

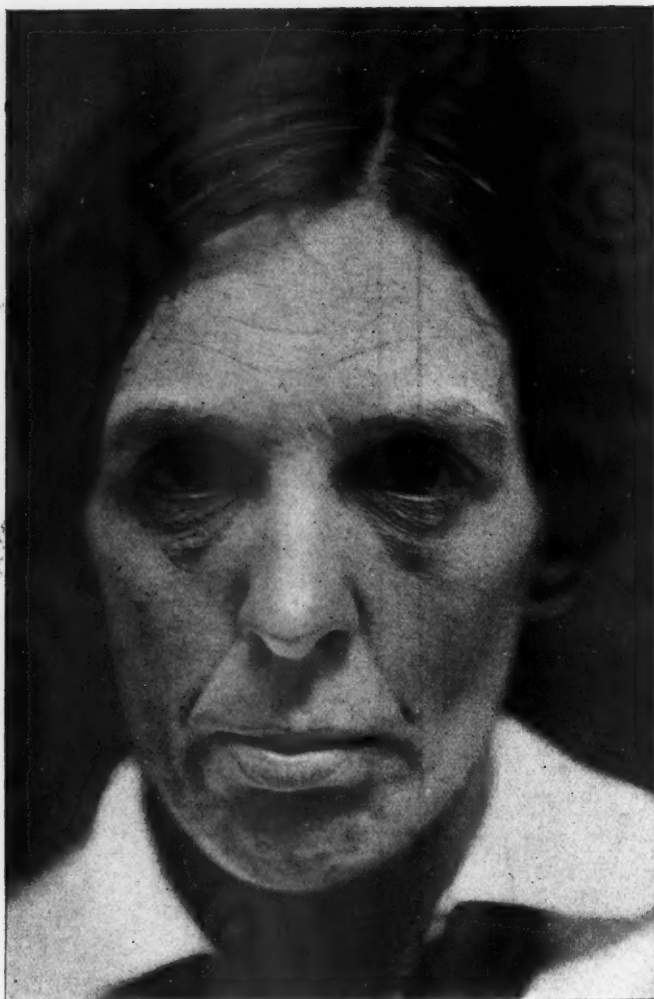


Fig. 3. Shows the unnatural strained position of the lips when closed. As it was an effort to keep the lips closed they were usually in the position shown in Figure 2

Her parents made efforts to have her trouble corrected, but the patient was so nervous and so afraid of pain, and the teeth were so ugly to her that she had no desire to preserve them. Neglect led to a deplorable condition in the mouth and she gradually lost all her teeth except the six anteriors above and below. Mastication with the anterior teeth was necessarily imperfect, and not only resulted in poor digestion, but

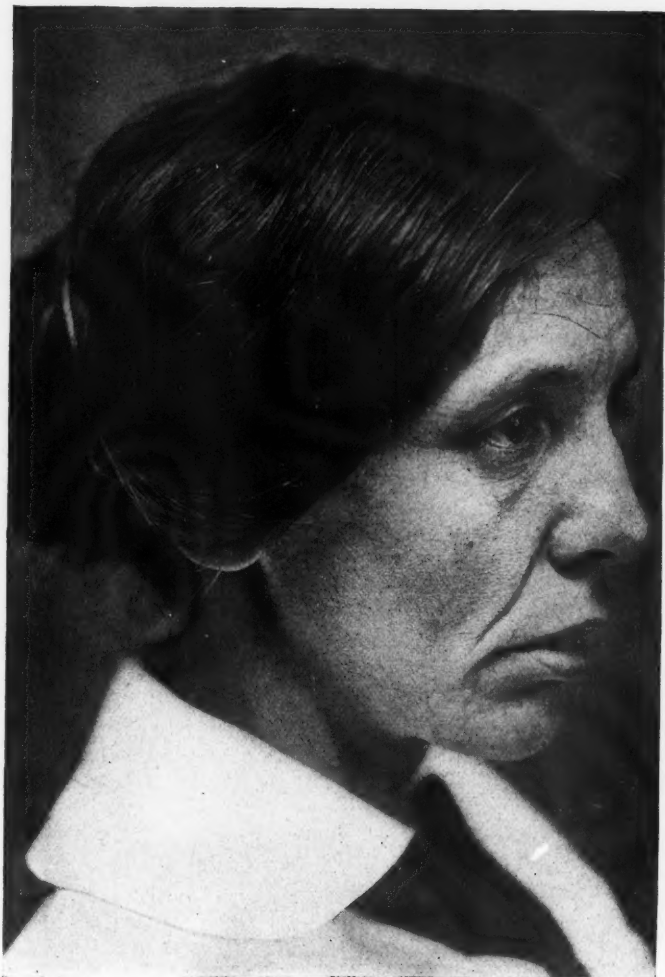


Fig. 4. Lips in normal rest, showing a marked protrusion of both upper and lower lips. Note the drooping expression of the eye, caused by the sagging of the cheek muscles which in turn is due to lost molars and bicuspsids.

caused the upper teeth to push forward, making them more prominent, while the lower teeth inclined backward allowing the lower lip to fall in.

All efforts by other dentists to fit partial upper and lower dentures failed and the patient's health and appearance became gradually worse. At 34 years when the pictures were taken she looked many years older.



Fig. 5. Same woman with full permanent dentures in place six weeks after the extraction of her teeth and the removal of one-quarter inch process from upper and lower jaw. The distance from nose to point of chin is lessened one-half inch, thereby making a much improved cosmetic effect.

In the treatment of Mrs. K. all the remaining teeth were removed and $\frac{1}{4}$ inch of the upper alveolar process and $\frac{3}{16}$ of the lower process was removed. Six weeks after the operation full permanent dentures were inserted (see Fig. 5), and the patient's appearance was so greatly



Fig. 6. Profile of same. Note how the lifeless, sagging expression of the eyes has been revived into what is animated and pliant. The artificial denture has brought about a complete recovery of the sagged muscles and softened the facial expression.

improved that a pride, which had seemed entirely absent before, asserted itself and she insisted on having her hair "waved," something she had not done for years.

When one thinks of the possibilities in this branch of prosthesis, of the transformations which result when this simple operation is intelligently performed, it must inevitably increase the earnest worker's enthusiasm and love for his profession, for surely in the case of Mrs. K., a transformation was wrought which was not only aesthetic, but physical, mental, and social as well; it opened a new world to her. The



Fig. 8. Cast of same mouth 6 weeks after the removal of the 6 anterior upper and lower teeth and process

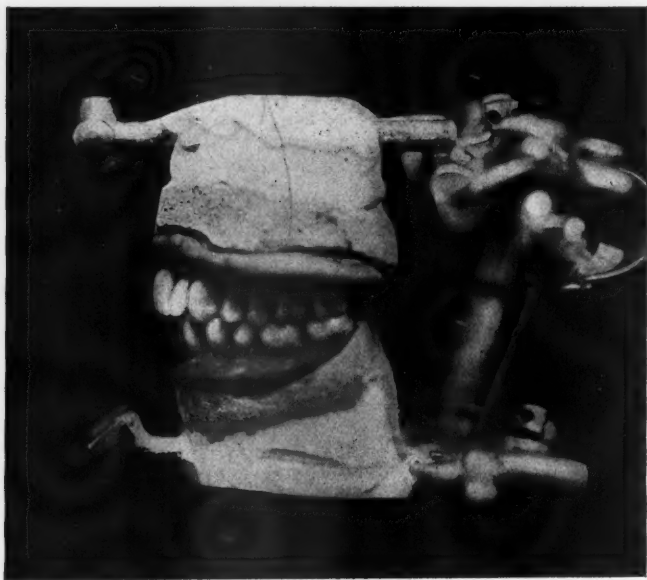


Fig. 9. Upper and lower denture mounted on same cast where it was possible to set the teeth up anatomically, establishing a normal occlusal plane and compensating curve



Fig. 7. Profile with lips in normal rest. Note the lower lip as compared with view in Figure 4

knowledge that one has made that change possible is not the least reward for one's efforts.

Judgement and care in the employment of the means at one's command are, of course, necessary.

Marked improvement in both health and appearance has followed every operation for the removal of prominent alveolar process. Other cases will be illustrated in subsequent articles.

40 EAST 41ST STREET

(Continued in March Digest)

ORAL HYGIENE AT LOCUST POINT

By CHARLOTTE FITZHUGH MORRIS, BALTIMORE, MD.

FIFTH PAPER

Edward has just heard a piece of promising news. One could get excused from school at 1:30 to go to the "dentist'." He was rather behind hand in his work. He hadn't gotten his afternoon lessons because his father and mother had had an interesting row and Edward had looked on, holding the baby out of the danger zone. Surely the dentist would not be any worse than Miss Hattie was when a fellow hadn't had time to get his lessons. And that teacher that took the children up town let them have a good time, and Edward was sure he could get around her if he didn't like the dentist. He could act sick or something—even cry—and maybe he would get a penny to stop crying and be good. Yes, there were infinite possibilities in going to the dentist. So a card was made out for Edward Tully.

The teacher, who was to take him with seven other children, beheld a neat, rather handsome little boy ten years old. His eyes and hair were very dark, his skin clear, and his front teeth, at least, undid all the theories of tooth cleanliness, for in spite of Edward's scorn of those dinky little tooth-brushes, they were beautifully sound and white. Fortunately for the teacher, she was not a prophet, and the ensuing hours at the dispensary were beyond her vision.

On the street-car, Edward chummed up with a little boy of seven who was also "goin' to th' dentist'." Instinct told Olaf and Edward that they were an invincible combination. The older boy was resourceful in thinking up mischief, the younger carried out his plans to perfection; the rest of the children applauded the result. Teacher couldn't help laughing either, so what was there to fear? Gee! this going to the dentist' was a cinch! Edward decided that he would have a series of tooth-aches all winter. To put a finishing touch to his enthusiasm, he discovered that Olaf's doting mother had provided her suffering (?) child with a dime.

Arrived at the dispensary, there was a second or two of awed quiet on the part of this happy combination, but they immediately accommodated themselves to their surroundings. The dust and dirt on the steps and floors of this man-kept building probably made Edward feel perfectly at home. At any rate, he lost no time. He landed like a panther on its prey on one of the two dental chairs placed in a private room at the children's disposal and began to instruct Olaf in the art of pumping him up and down. Teacher (Doggone her!) interfered.

During their dental session, Edward and Olaf were unusually good. Peace reigned for the first time while Edward was getting treatments in his molars. The prophecy of the good children (who always seem mysteriously to envy the bad ones their badness) that, "Tully will cry" was not fulfilled. "There's a tear, Mama's little cry-baby," jeered one of the youngsters but Edward was ready for him—"Hey, Mister," he appealed to the dentist, "Didn't you squirt some of that water in yer little pump into me eye stead of me tooth?" and the kindly dentist, laying aside his professional reputation in the most accommodating manner, assured the children that the water in Edward's eye was his mistake.

When Edward's and Olaf's work was done, there was a free hour on their hands. Olaf begged to be allowed to leave the dispensary to spend a nickle. Edward asked to accompany him. A little boy with ten cents in his pocket needs solicitous care. Permission was granted with much emphasis of the teacher's confidence in allowing the children to be absent for ten minutes. They returned in due time and distributed their purchases most generously among the other children. When the candy had disappeared time began to drag again. Edward and Olaf, suddenly severing their contract, had a fight. Olaf cried, Edward sulked. As a conclusion to his scolding the teacher tried to make them beg each other's pardon. This was too much for the manhood of either boy to endure. Neither one would do it first. Finally, while the teacher counted one, two, three, the children chorused with deep cordiality "Sorry-I-hurt-cher" and the previous relations of a friendly alliance were established. Presently came this request, meekly proffered by Olaf:

"Please, Miss, can I spend my other nickle?"—and from Edward, eagerly:

"I'll take good care of him again."

But teacher told them they could not go out again. After a while when the teacher's mind was absorbed with a patient, this resourceful pair were granted permission to get a drink. On their return, Olaf's pockets were bulging. Edward's heart was triumphing—Gee, he could get around *any body*. Funny how easy teachers were Teacher took the bag of candy and put it in her own pocket. Olaf cried, interrupting himself only long enough to kick his plump sister in the stomach and start her off lamenting. Edward informed teacher that he hated her, that he'd *never* sit by her on the car again, and he'd never, *never* get his teeth filled. Olaf was put into a corner and informed by his teacher that she could hardly stand the sight of such a naughty boy, that she certainly couldn't stand hearing him speak the rest of the afternoon and that she would write a note to the principal of his school and leave them both to her. Edward was considerably impressed. One could never

tell what an angry school-principal might do. She was an awfully strong big lady, too. "She sometimes slaps bad boys so hard she knocks 'em clear down," an awed little girl informed him.

The principal, on the receipt of an explanatory note from the teacher, laid an awful penalty upon Edward. He was to get five *Goods* in class work before he was to be allowed to ask permission to go to the dentist again. If the five *Goods* were not forthcoming very soon, never again would he have the privilege of going to the dentist with the other children. At last Edward was chastened. For five school days his class-teacher scarcely recognized him. He slaved; he did home-work, and if his father, "the worst man on the Point," came in drunk and threw things around, Edward looked on abstractedly and calculated problems in decimals.

Finally, with a note from his teacher saying he had received five *Goods*, in as many days, he presented himself at the office, and after a talk from the principal on obedience, responsibility, manliness, honor, and other abstractions, made concrete by this experience, Edward was granted the privilege of returning to the dentist.

While he had been working for his *Goods*, Olaf's dental work had been completed, so possibly Edward's consequent change in attitude was affected in part by the absence of his little brother conspirator. At any rate having politely offered his promised "first turn" to some one else, he sat quietly on the radiator and encouraged the victims in the chair. He told the children the story of Androcles and the Lion, he wiped a little girl's eyes on his shirt sleeve. In answer to the teacher's inquiry as to his health, he said: "Sure I'm not sick—just bein' good—don't worry about *me*." When two of the children got into a quarrel he said: "Shut yer mouths right up while I count one, two, three and then say yer sorry you done it," and a most gratifying reconciliation occurred.

This was no momentary change of heart. Edward had a great deal of dental work to be done, and on innumerable trips to the dentist he sat mutely on the radiator awaiting his turn, overlooking the children paternally, and invariably telling them about Androcles and the Lion.

It is true that in order to have his teeth filled, Edward missed several hours of class-work. In spite of this loss, he is an expression of the highest aims of the Francis Scott Key School. He did what many of us who are more experienced and have had more chances often fail to do: he made a very fine use of a very severe punishment. When he very gravely and proudly pocketed another note to the principal (who slapped boys clear over!) saying that he had had his work completed in a way that proved he was a credit to the school, one felt like musing over the strange and subtle connection between a toothache and one's hopes for the race.

(Concluded in March Digest)

CARE AND TREATMENT OF CHILDREN'S TEETH

By WALTER R. HUGHES, D.D.S., OAKLAND, CALIF.

TREATMENT OF ABSCESSES AND PUTRESCENT PULPS

This class of cases is probably the most difficult and arduous to handle of all cases in the general practice of dentistry. The little patient comes to the dentist worn out with pain. His system is depleted by several hours of hard fever. A thousand horrors of the ugly forceps or tantalizing buzzer come into his vision. Yet the hard fought battle is soon conquered. In most cases the filling or débris may be easily dislodged. With as large a spoon as can be used the operator should lift out the decomposed dentine and débris. Use the engine with a small sharp burr when necessary to dislodge an old filling or to assist in opening into a pulp cavity. Then with two or three well directed cuts with as large a spoon as will fit into the cavity, the decomposed substance is lifted out. When possible open into the pulp chamber. Wash out its contents with warm water. Then after thoroughly cleansing the pulp cavity, seal in with chloropercha and cotton dressing of carbo-eugenol or oil of cloves, or camphor and chloral or cresote or Buckley's phenol compound. After a day or two the cavity is again thoroughly washed with warm water. Creosote or Black's 1-2-3 mixture is sealed in the tooth for about a week's time.

At the next appointment if the canals seem in perfect condition, a root filling of chloropercha or eucapercha compound is made. Many very excellent results have been obtained by making a root canal filling with equal parts of zinc oxide and tannic acid made into a paste with oil of cloves or creosote. This is inserted into the canals and sealed in with a cement or other filling of semi-permanent nature.

The method of treatment as suggested by Dr. J. P. Buckley is followed by many operators. Dr. Buckley pursues the following course of treatment with teeth having petrescent pulps and abscesses:

"In the treatment of putrescent pulps and abscesses in deciduous teeth, formocresol is a valuable remedy. At the first sitting the pulp chamber should be opened and a small pledget of cotton saturated with the remedy should be hermetically sealed in the tooth. At a subsequent sitting as a rule, the canals will be found to be sterile. In case they are not in this condition, the first treatment should be repeated. With the canals sterile, they can be filled as the operator deems best. Where it is desired to keep the tooth in the mouth for only a year or so, when it will be lost to make room for the erupting tooth, a paste can be made of

thymolized calcium phosphate as the powder and formocresol as the liquid. The paste can be gently packed into the pulp chamber and a cement filling inserted; but where it is desired to retain the tooth for a period much longer than a year, it is the safest practice, after the canals are sterile to flood them with eucapercha compound and insert a gutta-percha filling."

WHEN TO OPERATE

No cavity is too small to fill or operate upon. If neglected it soon becomes too large for the average operation, and becomes one involving the pulp of the tooth. In most cases where the deciduous teeth need operations placed, generally silver may be inserted. Or perchance, a gold inlay could be placed in deciduous molars to good advantage. In the six front teeth wherever attention is demanded, either silicate cement or other cement fillings are placed. If there exists a condition in which the interproximal space is too wide for fillings to approach each other in points of contact, yet where it is desirous to retain this space, sheet gutta-percha may be placed and retained as a semi-permanent filling for an indefinite time. Yet, on the other hand, where a space is too wide for this procedure, or where a space has been made by the premature loss of a tooth, the correct mesio-distal relation is retained between the teeth by cementing upon the adjoining tooth, a regulating band to which a lug or wire loop has been attached to retain the teeth from falling toward each other. But if the space is not very great it is sometimes bridged over by placing a piece of German silver wire in the bottom of a cavity of the adjoining tooth and projecting it far enough to fill the space and insert a filling over it. This will retain the proper mesio-distal length of the arch, and assist to insure sufficient room for the eruption of the permanent teeth. The care and treatment of children's teeth demand all the skill, good judgment and perseverance which the tactful operator has at his command.

In general, silver or copper amalgams seem the most expedient materials to use for this class of work. The operator is not compelled to retain the operation in perfect dryness until its entire completion. If moisture should come in contact with the material before the operation is completed, it may be dried and the work taken up where the little patient caused a cessation of operations. We must not overlook the value that cement plays as filling for the little patient's teeth. Where a cavity seems too deep to venture a silver filling for fear of injury to the pulp, cement is placed. Black Copper cement is universally used in the surfaces of deciduous teeth distal to the median line of the cuspid, either upper or lower. This will often retain a tooth in its full usefulness

during the lifetime of that particular tooth. Nor should we overlook the uses that can be made of "pulp capping" when working or operating upon the deciduous teeth. Many a frail tooth is kept vital and nursed along, doing its daily pro rata of the work of the deciduous teeth, by making a capping or covering over the pulp to protect it from pressure and thermal changes which so frequently take place with the immature judgment of our younger patients. This is made of carbolized resin and zinc oxide, or other substitutes which may prove as efficacious. Make a paste of the oxide of zinc and gently tease it into the cavity, thus forming a covering over the pulp. After this is done a cement filling is placed over the capping. Sometimes chloropercha can be flowed over an exposed pulp, or one near exposed, and sealed in with cement. This will generally retain almost all the deciduous teeth until their successors are ready to take their places.

There is one very valuable adjunct in the treatment of deciduous teeth to which we must give full credit for its wonderful preventive quality, i. e., silver nitrate. The one great objection to silver nitrate is more than counterbalanced by its efficiency and value in this particular use. It tends to darken the painted area but it seldom darkens unbroken enamel. Where caries has started in the enamel and only a few rods have fallen out it will not darken the exposed dentine. Yet, when applied to a cavity where there is considerable advance of caries, it darkens the area. But withal, while there might be some objection to the darkened or stained area, yet, when we consider that its application once, twice, or three times will temporarily abate or arrest the advance of caries, we must admit that this virtue is greater than the objection. The value of silver nitrate cannot be overestimated. Use a saturated solution, or where a weaker solution is desired, dilute sufficient quantity of the stock saturated solution with phenol to suit the requirements. Often a solution is made up fresh by using the crystals of silver nitrate dissolved in phenol or distilled water. This is used in dental practice to check caries of the deciduous teeth where a filling operation is impracticable. Use it freely in deciduous teeth. In fact, where shallow cavities occur the tooth surface is painted or rubbed up with nitrate of silver and as a result caries is so abated that frequently the tooth reaches its natural exfoliation without further consequence. In some shallow cavities where the walls are broken down, the sharp angles are reduced to smooth surfaces with the disk on stone and then an application of silver nitrate will tide over the little one until he has a new tooth ready to take its place.

A further consideration in the treatment of the child's teeth which must not be overlooked, if we are to anticipate a full life to the operation

to be placed, is the amount of abrasion that takes place upon the occluding surfaces of the teeth. This renders excessive strain upon the filling previously inserted. It also shortens the body of the tooth between the occlusal surface and the pulp. Thus, it is necessary in many cases to make fillings broader in order to obtain bulk of filling material so that the finished operation will have sufficient strength to withstand the heavy biting, and chewing of hard substances. Often the little patient will take a piece of hard candy and crunch it in one bite with the force of a battering ram. Thus, where you are using silver, cut the cavity broad enough to compensate for the shallowness of the filling to give strength to the finished operation. Usually these abrasions progress very rapidly. The wear upon the child's teeth is very great. It is not infrequent to find most of the cusps of the molars worn flat. Sometimes the development grooves which were prominent features when the tot was three years old have gradually disappeared so that in some cases the occlusal surfaces have become flattened at the age of six years. In cases of prominent loss of tooth substance by abrasions or wear, the materials most used to repair this damage, especially where the wear is coupled with cavities in the proximal surfaces, is silver or inlays. The gold inlay will do a very valuable service when used in this place. In my opinion it is even of greater value than silver. At night after a hard and strenuous play day the little patient grinds his teeth with a very heavy biting stress. It is during this time that great havoc and destruction is rendered frail teeth or teeth with large fillings insecurely anchored. Thus in our operations for children we must not only guard against the natural wear of the teeth by day, but we must fortify the operation and tooth against the terrible stress which is applied to the teeth during the dreams of the night.

CONTACT POINT

It is of equal importance to make points of contact in interproximal space for children as for adults. This must be done to retain or preserve the correct mesio-distal measurements of the jaws, and to prevent the food packing between the teeth and injuring the gum septum; to form a contact point if possible, and to preserve the proper interproximate space between the teeth. This latter tends to assist the permanent teeth to erupt normally.

It is the opinion of many that almost all the cavities upon the occlusal surfaces of the deciduous teeth could be avoided if the parents would have the temporary molars thoroughly polished at an early age. In fact most of operative procedure could be eliminated if more time would be devoted to prophylactic work.

In the treatment of children's teeth we should not overlook the fact that if things go wrong the little folks are subject to the same suffering as the adult patient. If their teeth are decayed, the same candy will make their teeth ache as those of the adults. They are subject to the same abscess conditions. All that will apply to the adult patient will certainly be found true in the child. We are merely children grown up.

From many reports upon the effect that oral hygiene plays in the general health of the child it is noted that 50 per cent. of all diseases of children find their beginning in foci of infection located in the mouth. It has been demonstrated clearly that the little patient's advancement in school is in the same ratio as the condition of the health of his mouth. In a recent report it is noted that about one half of the absence from school in New York City was due to a failure to maintain proper conditions in the health of the mouth. It would appear from benefits which accrue from strict attention to hygiene of the mouth that more stringent rules should govern the health of the child's mouth in school than is frequently observed. It really seems that the efficiency of our nation in the future will depend upon how strictly rules regulating the health of the mouth are followed. Look well to the child's teeth

901 FEDERAL BUILDING.

TOOTH BRUSH AND TOOTH PASTE FUND

The following contributions to the Tooth Brush and Tooth Paste Fund have been received up to going to press with this issue of THE DENTAL DIGEST. While the results are gratifying so far, we hope this movement will grow to large proportions *because there is a real need*. We are sure the members of the dental profession will want to do their full share in meeting this need.

CONTRIBUTORS

H. J. Brachman, D.D.S., Lieut. U. S. D. R. C.	\$10.00
George Wood Clapp, D.D.S.	10.00
Eugene Katz, D.D.S.	10.00
The Lohead Laboratories	10.00
Name withheld	10.00
" "	10.00
" "	10.00
" "	10.00
	<u>10.00</u>
	\$80.00

A PORCELAIN TIPPED SHELL CROWN—HOW TO MAKE

By F. E. JUDSON, D.D.S., ANTIGO, WIS.

We, as dentists, all know how much trouble ordinary gold shell crowns give where they are inserted in mouths wearing artificial teeth, if the artificial teeth come in contact with them. As a rule they wear through in a very short time. Some five years ago, I set to work experimenting on this proposition, and decided to try the construction of a full Porcelain Tip, which I succeeded in doing, and find the same to be giving perfect satisfaction, not having had a single complaint from the large number which I have inserted, and will say that there is not a month goes by that I do not insert a number of those crowns. They can be adapted to any tooth in the mouth. As an illustration we will take a lower bicuspid. First prepare the root in the usual manner for the reception of a gold crown, then take a piece of 30 gauge 22K gold plate, cut your band about the thickness of a cusp shorter than the finished tooth is to be and give it the proper contour, now take an ordinary vulcanite bicuspid, cut it off with a knife edge carborundum wheel through where the pins are, in severing, if the pins do not all come away from the cusp part, they may be ground out by attaching same to a small piece of end wood by means of a little Dental Lac, as it is important that all metal be removed from cusp to be used, to avoid future trouble in the construction of crowns; after all the pins have been removed by grinding, the next procedure is to grind that part going into the crown nice and flat, then with a square edge carborundum stone, grind entirely around this cusp piece, up to about half the height of cusp piece, as per dotted line on Fig. 1.



Fig. 1.



Fig. 2.

This need be only to the depth of 30 gauge plate. Now take a knife edge carborundum stone, going entirely around this, forming a well defined V-shape groove, like Fig. 2.

Now take a piece of 36 gauge 24K plate about one eighth inch wide and long enough to go around the porcelain, and lay about one thirty-second of an inch, and carefully burnish the same into groove formed in porcelain, allow this gold to extend well above and below the groove to the base of the porcelain. A small flat or oval alloy burnisher works nicely in doing this. This having been done, proceed to adapt it to the gold band and get your articulation, after this is as you want it, remove

from articulator, prepare your 18K solder, grasp shell in convenient manner with porcelain attached and pass the same back and forth through a bunsen flame several times in order to heat it up well before applying the blow pipe flame. Now apply your boraxed solder, and proceed to solder, using the blow pipe for same, if you are careful to get no borax on porcelain, you need not fear cracking same. Have never cracked one yet and have made dozens of them; after soldering is completed, stone, polish and set in usual manner, and I am sure you will be delighted with results.

A QUEER CASE

Several years ago when Dr. H. M. MacDonald, New York Representative of the Columbus Dental Manufacturing Company, was practising in West Mansfield, Ohio, a patient came in one day and asked to have his teeth examined.

He was a tall, raw-boned young man, who looked strong, but had a reputation for laziness, and was considered dull, and his services as a farm hand were only sought as a last resort, because the slightest hurt or disturbing influence brought on a fainting spell, and he seemed to have little or no endurance.

Upon examining his teeth Dr. MacDonald found the right central about double the size of the normal left central and the patient wanted the tooth extracted because of its appearance of abnormality, or "freakiness" as he expressed it.



There was no discoloration, no soreness, nor other indication of disease about the tooth, and the patient gave no history of pain in the past. After some discussion Dr. MacDonald agreed to extract the tooth and to his surprise found the root in a veritable pool of pus, with the peculiar cup-like formation of the root filled with the greenest and most putrid pus Dr. MacDonald had ever seen.

Upon examination the outer edge of the extremity of the root was found to have a ridge of enamel which extended for perhaps a quarter of the circumference.



The four illustrations here shown will give a good idea of the appearance of the tooth and the abnormal lingual surface and unusual root.

The extraction of the tooth had an almost immediate effect on the patient. He became an active, ambitious young man with both strength and endurance and his mental improvement was quite as marked as his physical regeneration.

OBITUARY

As the January issue of the DENTAL DIGEST was going to press we received announcement of the death of Dr. Joseph Lemuel Mewborn, aged 79 years, of Memphis, Tenn., where he had practised dentistry for 52 years. Dr. Mewborn was highly esteemed as a member of the dental profession and as a citizen.

He was a member of the Memphis Dental Society and a Civil War veteran. Surviving him are four sons and four daughters.



BROTHER BILL ON "JUST WALKING"

MY DEAR NEPHEW:

Your replies to my last two letters remind me of something which happened two weeks ago Sunday. It had stormed the day before and all the trees and hedges were beautiful with heavy loads of white snow. As I was coming back from church I met Jack Cummings and his little girl on Main Street. "Hello Jack," said I, "where are you going?" "Oh, nowhere in particular," said he, "just walking." We talked for a few moments about things in general and then he left me to continue his leisurely stroll.

I had not gone one hundred yards when I met his brother Joe walking down the street with his oldest boy. I could see that they were talking with evident pleasure about something, but they stopped a minute to chat. "Where are you going?" said I. "Down to Linden Street to take a picture of the snow on Judge French's hedge; it's the most beautiful thing I've seen in a long time," said he. "The boy will put a picture of it in his album." He showed me a little camera, worth perhaps five dollars, in the boy's hand.

A week later he stopped me on the street and showed me prints of the pictures. They were good pictures but not so good as the story he told. Said he: "We took about a half a dozen pictures around town after we left you. The weather turned bad in the afternoon and we developed them in the bath room and made prints from them that evening. We had a dandy time doing it and the pictures make quite an addition to our collection."

Now let me apply the stories of Jack and of Joe to your letters. I wrote wishing you the compliments of the Christmas season, reminding you how much I have been interested in your career from the time you were a small boy and asking you how much farther ahead, financially, you would be at the end of this year than you were at the end of 1916.

Your first letter in reply said that you had had a busy year, that collections had been good so that only a small amount of money remained outstanding, that all of the family were well, and that you all wished me the merriest of Christmases and the happiest of New Years.



Jack Cummings and his little girl "just walking."

Evidently you thought over this letter afterward and felt that you had left out some things that you should have put in. Anyway, you wrote me a long and excellent lecture on the true values in life, how widely they may be, separate from money, how closely they are related to the spirit within a man, and how they find their finest expression in service to others. I read it with interest and pleasure because it was really fine, and because each of us needs to have these things refreshed in his mind. All that you said was true and fine but it was not all of the truth nor all of the fineness.

I did not write my inquiry to turn your attention in any large degree or permanent sense away from the things that you wrote about. It is a

sign of progress in life to be able to think such things and it is a mark of spiritual riches to be able to practice them. I wrote you as I did because I am about thirty years older than you are and I see some things that you may not see for thirty years yet, unless someone calls them to your



"Taking a picture of the snow on Judge French's hedge."

attention with enough force to get them through the outer layer of your mind and into your active consciousness. Thirty years ago I thought as you think and felt as you feel. I may add, in a sort of parenthesis, that I still feel all that you wrote and find my greatest pleasures in intelligently following the course you prescribe. At that time my mind was open to truth but not all of the truth. I shut it against some things as unworthy, which I have since learned to be well worth while in their proper places and degrees. Because someone opened my mind to the worth whileness of these things I want to see if I can open just a little place in your mind for the same things.

I told you the story of Jack Cummings who was "just walking," and

his brother Joe who was going somewhere to do something definite, because your financial progress through life at the present time is well illustrated by Jack. You are "just walking." You are making all the motions that would take you somewhere but you have no well defined object and no direct path to one. You are working along from year to year rendering good service, receiving fair fees, collecting the amounts due you, doing a good bit of charity work, paying your bills, loving your family and being loved by them. That is all very fine, but in a financial sense it is not going anywhere; it is "just walking."

Now notice Joe's plan and compare it with Jack's. He was going somewhere to do something to which he looked forward with pleasure. I do not know whether he actually walked any farther than Jack did because it is not far from his house to Judge French's. He did not have any equipment that Jack could not have bought with the sum he pays for a box of those big black cigars he smokes. But Joe and his boy were having more pleasure from mere anticipation, as one could see from their faces, than Jack and his girl were having in their whole walk. He and the boy had fun all of the stormy afternoon with what they had begun in the morning and Joe was still getting pleasure out of it when he showed me the pictures and described, with real enthusiasm, certain special beauties of the scenes.

The application of the principle from which Joe got his pleasure to your financial plan is distinctly worth while. It is a plan of deliberately getting somewhere and doing something as contrasted with "just walking." It will not interfere in the slightest with either the high ideals expressed in your letter or their practice in your life. In fact, it will clarify the conceptions and strengthen the practice.

And at the risk of boring you somewhat, I am going to suggest to you an appropriate plan for the beginning of this year, with an assurance that if you follow it for a year or two, no one will be able to talk you out of it.

You probably remember my having told you how a banker patient and friend started me on an intelligent financial plan in the conduct of my practice and how much I owe him for it. Well, along toward the close of that year he came in for service. Before he went out he said: "How much more are you going to be worth at the end of this year than you were at the end of last?" I had never thought of my financial program in life in that face-to-face-with-the-facts manner and replied: "I haven't an idea; not much certainly; perhaps not anything." It flashed across my mind how well worth while it would be to know and I said: "If there is any way of finding out, I should like very much to know." "It's the easiest thing in the world," said he. "All you have to do is to

write down in one column all the things you own or are due you at their present cash value if you were compelled to sell them. Put down in another column all that you owe. The difference between the columns will be your net present worth."

That evening Mrs. Bill and I began it. We resolved not to list anything that could not be sold for cash, and, however much it hurt our feelings, to list everything at the price for which we thought it could be sold for, if dire necessity should require the selling. We felt that if we did this, we could know just what she would have if anything were to happen to me, or what we should both have if I were incapacitated from work for a long time. We did not list the household goods, because while they had cost us quite a good deal, and were worth a good deal to us, they would not sell for much, and under any probable conditions we should need them.

When I had put cash sale prices on the equipment in the office, some of which I had had for years, I had left only a total, which, as the French say, "gave me furiously to think."

When we got well started my wife said: "Now this is all very well but if you were sick for so long a time that we had to sell the life insurance policy and use the money how much would it bring?" So I called up the agent of the life insurance company and got the cash surrender value of the policy.

Every once in a while I get out that first annual inventory and look it over. The items were few and small and they are so firmly graven in my memory that I can give you them here:

Cash value, Office Equipment	\$500.
(It had cost more than \$1800.)	
Due from Patients excluding doubtful accounts . .	527.
Cash on hand	317.
Cash Surrender Value Life Insurance	1,100.
Equity in house	1,200.
	<hr/>
	\$3,644.

When we had arrived at this total, my wife and I sat back and looked at each other in silence. It did not seem to be the time or the place for speech. I guess both of us were reviewing the years of hard work and self denial, were thinking of the children asleep upstairs, and of the future which was coming on apace. I had spent about four thousand dollars in getting my dental education and equipping my office. I had worked hard for several years. We had lived comfortably but without

many of the ordinary things of life which both of us always pictured ourselves as enjoying. Mrs. Bill had worked as hard and planned as carefully as I. At the end of ten years we had saved on an average about one dollar a day or three hundred and fifty-six dollars less than I had spent in preparation. If I had died that night she would have had \$1,344 worth of old office equipment, accounts yet to be collected from patients and cash in hand, together with \$5,000 from the life insurance, or \$6,344 all together on which to live the rest of her life and raise the children. If she managed to save the five thousand dollars, after everything was paid for, and invested it at 6 per cent., she would have had our equity in the house, the household goods, and eighty cents a day from the interest on which three people could live. If I were ill for a long time so I had to surrender my life insurance policy, we could have raised nineteen hundred and forty-four dollars, provided I could collect all of the accounts against patients.

I am not going to bore you with what we thought or said on that occasion, but from that day to the end of the year, I am sure that the \$3,644 was frequently in our minds and that it very greatly influenced our expenditures. As the result of more intelligent plans we were able to show a net present worth of nearly five thousand dollars at the end of the next year. And from that day to this we have taken, on December 31st of each year, a statement of our net present worth. I can assure you that it has given us no small pleasure to see it grow a little each year, until we know that if anything were to happen to me, the family could be kept in comfort.

Before I began this annual inventory, I was like Jack Cummings, "just walking." You are like him now because you are "just walking," financially. You do not know how much both of you would have in case of a long illness cutting off your income, or how much your wife would have in case of your death. You do not know whether you could endure an illness with a quiet mind, or whether to the burden of the sickness would be added the torture of well founded uneasiness.

From the time we began the habit of taking an annual statement, we have been like Joe Cummings, "Going somewhere to do something definite." And like him we have taken pleasure not only in the doing, but in the results.

I want to close by recalling to your mind that what you wrote about ideals had nothing to do with this subject. No matter how carefully we have had to plan in any year, we have never reduced or stopped our charities, either in service at the office or in cash. On the other hand we have been able to materially increase them and at this time of national and individual stress, it gives us great pleasure to know that we are able

to do our bit without materially impairing our provision for our own future.

It would pay you and Mrs. Jim to stop "just walking" and to commence "going somewhere and doing something definite, financially."

Yours with best wishes,

Bill

THE SAYINGS OF PETER

1. You are the most important factor in the conduct of your practice. Study yourself. Keep tab on yourself.
2. Shorten your hours of work and make each step certain and definite by deciding in advance what you are going to do and when you are going to do it.
3. What ten things are you going to do to-day?
4. Do it now. A job well begun is half done.
5. Advice that costs nothing may be worth just what it costs but even at that don't be afraid to ask questions, you may learn something.
6. Keep physically fit by eating wholesome food and taking proper exercise and by deep breathing. Don't forget to brush your teeth.
7. Have a place for everything and everything in its place.
8. Keep a record of everything, especially your good ideas.
9. Every man who spends less than he earns and saves the surplus is a capitalist.
10. A knowledge of how to earn your living is more valuable than a dozen courses in ancient history.
11. You must either be a slave to your business or make your business be a slave to you.
12. Your time is your capital. Your appointment book is your time keeper. Make appointments with your patients and instruct them in the value of keeping these appointments.
13. Charge something for everything you do.
14. Pay promptly. Collect promptly.
15. You should do better work to-day than you did yesterday.
16. Eliminate all false motions. Never make two moves when one will suffice.
17. You will get just as much out of your practice and out of life as you put into it.

"PETER."



TWO HUNDRED AND FIFTY VACANCIES IN THE DENTAL CORPS

1. The Surgeon General of the Army announces that there are, at the present time, approximately 250 vacancies in the Dental Corps, and that examination for the appointment of dental surgeons will be held at various points in the United States, on Monday, March 11, 1918.

2. Application blanks and full information concerning these examinations can be procured by addressing "Surgeon General, U. S. Army, Washington, D. C."

3. The Dental Corps is a constituent part of the Medical Corps of the Army, and consists of officers in the grades of colonels, lieutenant colonels, majors, captains, and first lieutenants. Appointments therein are made at the rate of 1 for each 1,000 of the total strength of the Regular Army, authorized from time to time by law. Law requires that first lieutenants of the Dental Corps shall serve 5 years in that grade before being promoted, but for the period of the existing emergency this provision has been suspended by Act of Congress, and after one year's service as first lieutenant, a dental surgeon is eligible for promotion to the grade of captain, after which, promotions are made in order of seniority as vacancies occur in the higher grades.

4. No applicant may under existing law be commissioned in the Dental Corps unless he is between 21 and 32 years of age, a citizen of the United States, a graduate of a standard dental college, and of good moral character, nor unless he shall pass the usual physical examination required for appointment in the Medical Corps, and a professional examination which shall include tests of skill in practical dentistry and of proficiency in the usual subjects of a standard dental college course. Whether or not the applicant is married has no effect upon his eligibility for the Dental Corps.

5. Application for appointment must be made in writing to the Surgeon General of the Army, upon the prescribed blank form. All the

interrogatories on the blank must be fully answered. In compliance with the instructions thereon, the application must be accompanied by testimonials, based upon personal acquaintance, from at least two reputable persons, as to the applicant's citizenship, character, and habits.

The selection of the candidates is made by the Surgeon General from the applications submitted, and a formal invitation to report for examination to the most convenient examining board in each case will be issued by him.

6. The examinations are conducted under instructions from the Surgeon General and usually last six days. No allowances can be made for the expenses of applicants undergoing examination, whether incurred in travel to and from or during their stay at the place of examination, as public funds are not available for the payment of such expenses.

Each applicant, upon presenting himself to the board, will, prior to his physical examination, be required to submit his diploma as a graduate of a standard dental college. Should he fail to do so the examination will not proceed.

7. A first lieutenant receives \$2,000 per annum; a captain \$2,400 per annum; a major \$3,000 per annum. These salaries are increased by 10 per cent. for each period of 5 years until the maximum of 40 per cent. is reached, excepting that the maximum salary of a major is \$4,000 a year, and that of a lieutenant colonel and colonel is \$4,500.00 and \$5,000.00 respectively. In addition to their pay proper, they are furnished with a liberal allowance of quarters according to rank, either in kind, or where no suitable Government building is available, by commutation. Fuel and light therefor are also provided. When traveling on duty an officer receives mileage for the distance traveled. On change of station he is entitled to transportation of professional books and papers and a reasonable amount of baggage at Government expense. Groceries and other articles for their own use may be purchased from the quartermaster at about wholesale cost prices. Dental Surgeons are entitled to medical attendance and hospital treatment without charge other than for subsistence.

8. Officers of the Dental Corps are entitled to the privilege of retirement after 40 years' service, or at any time for disability incurred in the line of duty. On attaining the age of 64, they are placed on the retired list by operation of law. Retired officers receive three fourths of the pay of their rank (salary and increase) at the time of retirement.

9. In order to perfect all necessary arrangements for the examination, applications must be in the possession of the Surgeon General at least two weeks before the date of examination. Early attention is therefore enjoined upon intending applicants.

PROPOSED LEGISLATION FOR NAVAL DENTAL CORPS

The National Dental Association, at the New York meeting, approved legislation placing the Naval Dental Corps on an equal status with the Naval Medical Corps, similar to the conditions existing between these two corps in the Army, as enacted by Congress, October 6, 1917. The Legislative Committee was instructed to promote this approved legislation at such a time and under such conditions as would seem most favorable. In this connection, and in view of some of the conflicting and discouraging reports regarding what was secured through the Army Dental Corps legislation, it was deemed advisable to wait for this to be officially interpreted before starting legislation for the Naval Corps. This has just been interpreted to our entire satisfaction which prompts us to follow the phraseology and general plan of procedure of the Army Corps legislation. Therefore, the following bill was introduced January 5, 1918, by Senator Lodge:

S. 3386

A BILL

To provide for commissioned officers of the Dental Corps of the Navy the same rank, pay, promotions, and allowances of officers of corresponding grades in the Naval Medical Corps, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Dental Corps of the Navy shall consist of commissioned officers of the same grades and proportionally distributed among such grades as are now or may be hereafter provided by law for the Medical Corps, who shall have the rank, pay, promotions, and allowances of officers of corresponding grades in the Medical Corps, including the right to retirement as in the case of other officers, and there shall be one dental officer for every thousand of the total strength of the Navy and Marine Corps authorized from time to time by law: Provided, That dental examining boards shall consist of one officer of the Medical Corps and two officers of the Dental Corps: Provided further, That immediately following the approval of this Act all members of the Dental Corps now in active service shall be recommissioned in the Dental Corps in the grades herein authorized in the order of their seniority and without loss of pay, rank, allowances, or precedence in the Navy: And provided further, That nothing in this Act shall be construed as in any way affecting the original appointment of officers to the Dental Corps as provided in the "Act approved August twenty-ninth, nineteen hundred and sixteen, making appropriations for the naval service for the fiscal year ending June thirtieth, nineteen hundred and seventeen, and for other purposes:" And provided further, That when ordered to active duty officers of the Dental Reserve Corps shall receive promotion in rank under the same relative conditions and provisions of active service as is provided in this Act for the Navy Dental Corps.

It should be distinctly understood that this legislation is entitled to and should receive the liberal support of the profession generally.

To that end we especially and respectfully request that *the Officers of all Dental Societies promptly write their Senators and Representatives endorsing this Legislation and soliciting their support of same.* It is as-

sumed that all Dental Societies, at some time, have endorsed this general legislative program and it is therefore suggested that official stationery be used in writing and you be specific in stating that you express the views of your Society. Individual letters are very necessary, especially from those who professionally serve or are acquainted with their Senators and Representatives, and further, it is very important that the merits of this legislation be most favorably presented to the members of both the Senate and House Naval Affairs Committee, as Committee support is an essential requisite. (A list of these is hereinafter incorporated). In these letters, it can very properly be stated that this proposed legislation is in exact harmony with what was enacted by Congress, October 6, 1917, for the Army Dental Corps and, as a question of justice, the same conditions should be provided for the two branches of the service. This appeal demands your prompt attention and I will appreciate it if you will please forward to me such replies as are distinctly favorable or unfavorable, as this makes it possible to keep in touch with the situation in an advantageous way.

The following is a list of the Committees above mentioned as published in "Congressional Directory" April, 1917:

SENATE NAVAL AFFAIRS COMMITTEE

Benjamin R. Tillman of South Carolina.	Park Trammell of Florida.
John Walter Smith of Maryland.	Henry Cabot Lodge of Massachusetts.
Claude A. Swanson of Virginia.	Boies Penrose of Pennsylvania.
Jas. Hamilton Lewis of Illinois.	William Alden Smith of Michigan.
James D. Phelan of California.	Carroll S. Page of Vermont.
Key Pittman of Nevada.	Miles Poindexter of Washington.
Thomas J. Walsh of Montana.	Warren G. Harding of Ohio.
Robert F. Broussard of Louisiana.	Frederick Hale of Maine.
Peter G. Gerry of Rhode Island.	

HOUSE NAVAL AFFAIRS COMMITTEE

Lemuel P. Padgett of Tennessee.	Adam B. Littlepage of W. Virginia.
J. Fred. C. Talbott of Maryland.	James C. Wilson of Texas.
Albert Estopinal of Louisiana.	Thomas S. Butler of Pennsylvania.
Daniel J. Riordan of New York.	William J. Browning of New Jersey.
Walter L. Hensley of Missouri.	John R. Farr of Pennsylvania.
John R. Connelly of Kansas.	Fred A. Britten of Illinois.
William B. Oliver of Alabama.	Patrick H. Kelley of Michigan.
William W. Venable of Mississippi.	Sydney E. Mudd of Maryland.
Carl Vinson of Georgia.	

INTERPRETATION OF ARMY DENTAL CORPS LEGISLATION

Members of the Dental Profession will probably be interested in knowing that the legislation enacted October 6, 1917, has finally been satisfactorily interpreted and that the members of the Regular Army

Dental Corps have received their promotion, subject to the required examination incident to promotion. This interpretation gives us all for which we have contended, and harmonizes very accurately with the views presented in our report at the New York meeting. In this report, we incorporated the estimates of the Army and Navy Register, relative to the number in the various grades, but those figures were under stated since we get 12 Colonels instead of 9, 20 Lieutenant Colonels instead of 16 and 87 Majors instead of 71. In addition there will be something more than 100 First Lieutenants of which a proportionate number will be promoted to the grade of Captain as soon as they have completed one year service. This promotion on the basis of one year's service is the result of the emergency legislation for the term of the war and was authorized by the provisions of H. R. 4897 to which bill we offered our Dental amendment. In view of the fact that the Dental Corps is placed on an exact status with the Medical Corps, our Corps naturally gets the benefit of this emergency legislation.

While no specific mention was made of the Dental Reserve Corps in our recent legislation, my contention has always been that the legislation for the regular corps automatically provided the authority for the necessary modification of the regulation relative to the Officers' Reserve Corps to place the Dental Reserve Corps on an equal status with the Medical Reserve Corps. This position has been thoroughly verified by the official interpretation and in the future whatever applies to the Medical Reserve Corps will apply in like manner to the Dental Reserve Corps.

In connection with this legislation, I received hundreds of congratulatory messages, consisting of letters, resolutions, telegrams, and cablegrams. These were received at a time when it was impossible to give them anything like the prompt individual attention they merited. Then followed weeks of conflicting reports, but now that this has been officially and satisfactorily interpreted, I take this belated and public method of kindly thanking all for their generous expressions.

Fraternally,

609 Hartman Building,
Columbus, Ohio.
January 15, 1918.

HOMER C. BROWN, Chairman,
Legislative Committee, N. D. A.



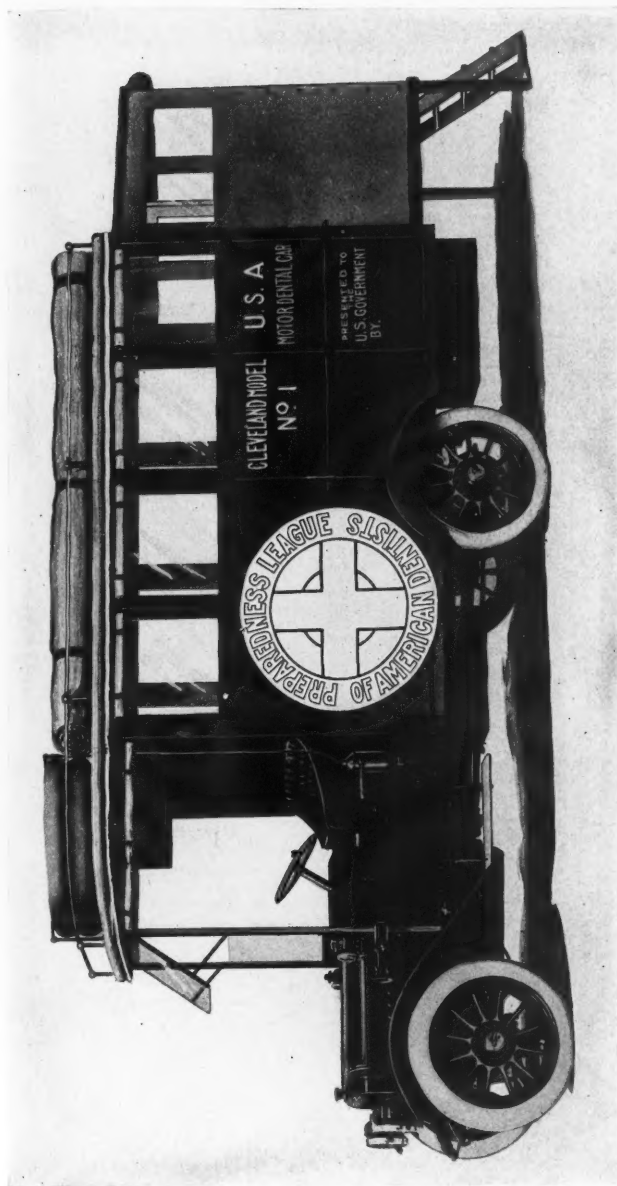
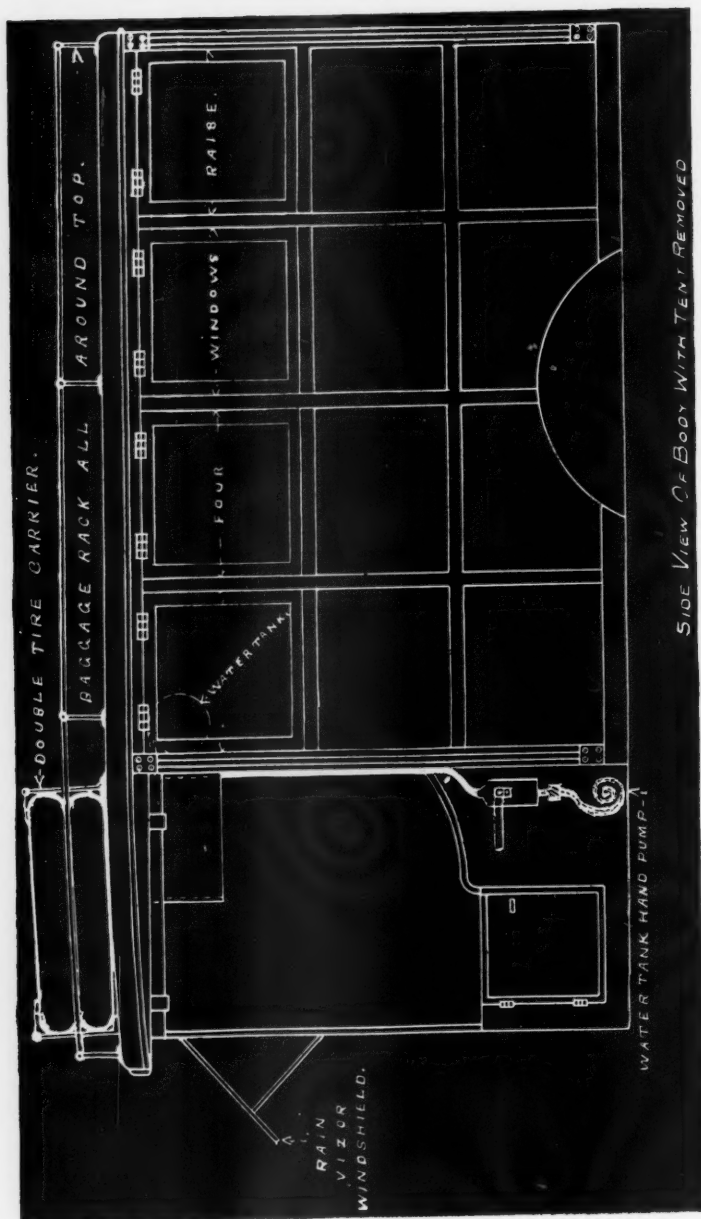


FIG. 1. This is the car that has been designed and standardized by the Ambulance Committee of the Preparedness League of American Dentists, and accepted by the War Department. These cars are under construction and will be tried out in the various cantonnments



SIDE VIEW OF BODY WITH TENT REMOVED

FIG. 2.

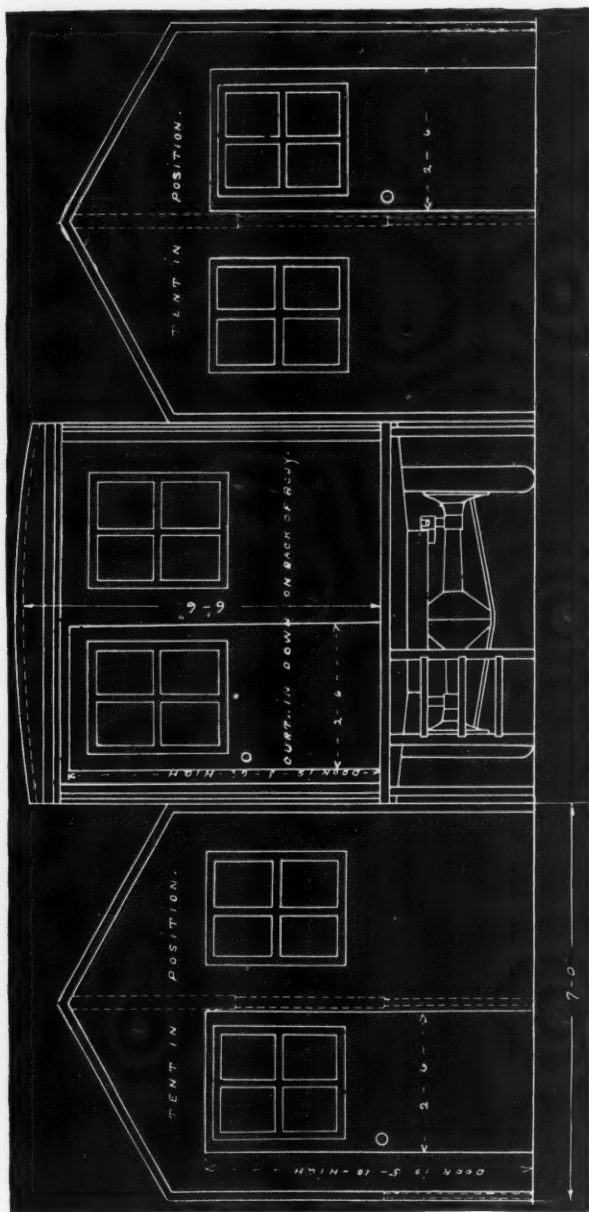


FIG. 3. The ambulance is equipped with two tents which are attached to the car at the sides, giving working accommodation for three men with each ambulance unit. When not needed the tents are folded and strapped to the sides of the car

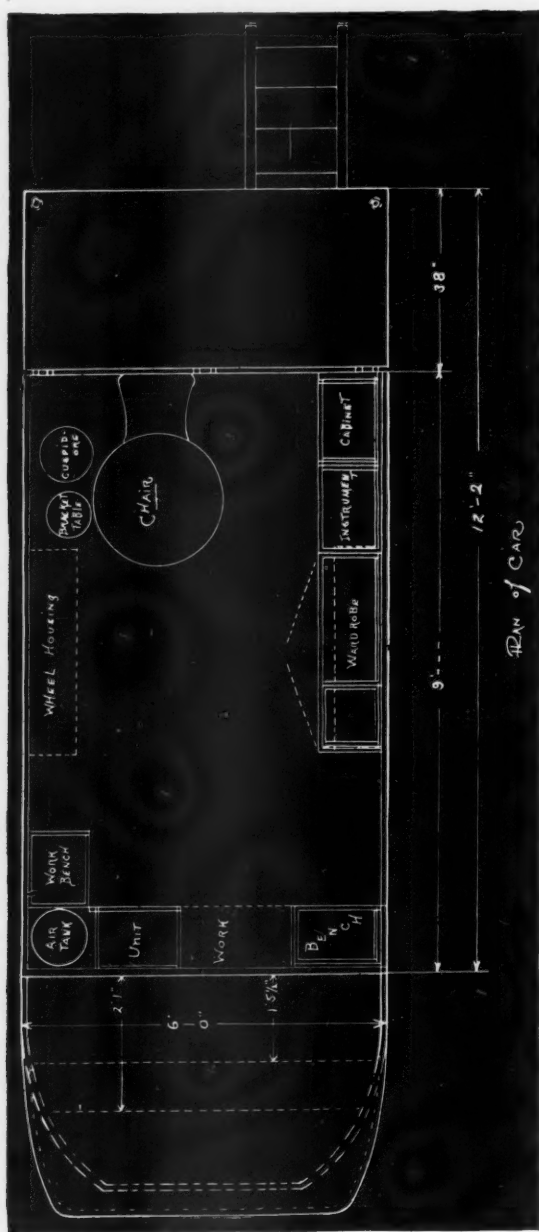


FIG. 4. The floor plan shown above gives an excellent arrangement for utilizing the space in the best way, until actual use demonstrates the possible advantages in some other arrangement. The water tank is suspended from the top and is shown in Figure 2

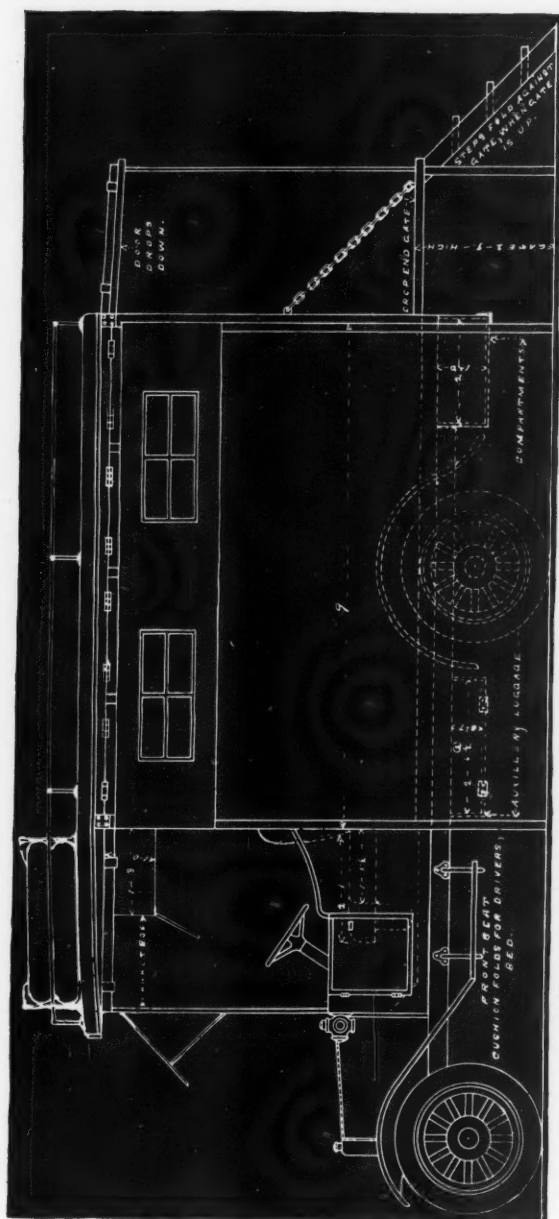


FIG. 5. This plan further shows the disposal of otherwise waste space such as the two underslung boxes for luggage. In addition the rear doors are shown open with the entrance steps in position. The baggage rail on top extends all around the roof of the car, providing space for extra tires, etc. The driver's seat cushion provides a bed for him and his blankets are kept right above his head.

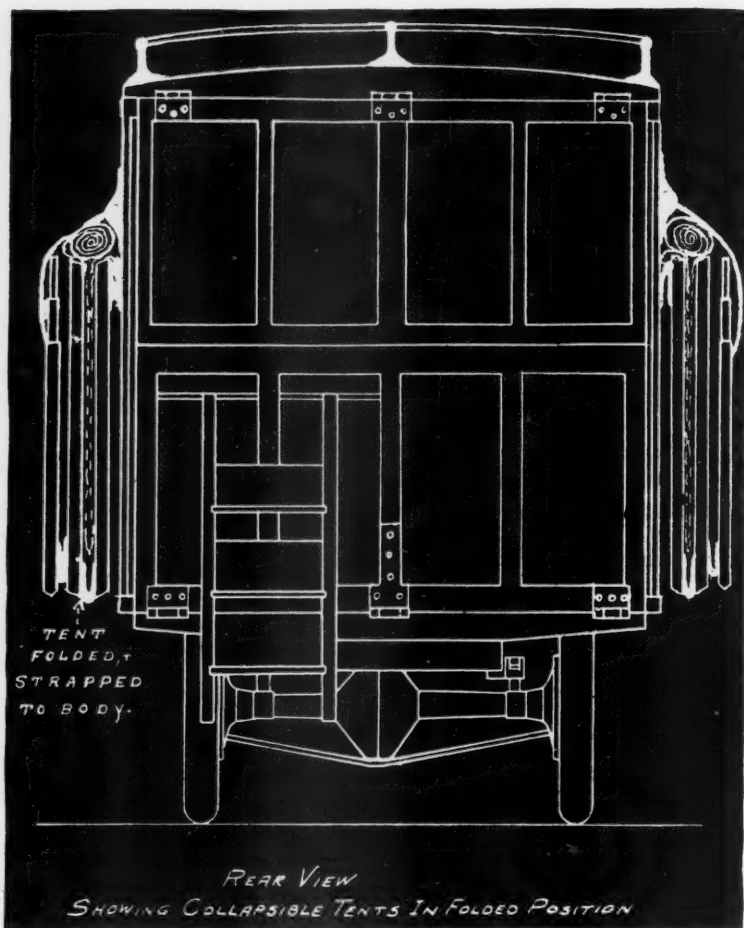


FIG. 6. As soon as these cars have been tested for efficiency the dental profession will be notified through THE DENTAL DIGEST and other magazines, when and where the cars can be seen in operation. The present cars are being built in Cleveland under the supervision of Dr. S. M. Weaver, Chairman of the Ambulance Committee.



BOOK REVIEWS

SURGERY AND DISEASE OF THE MOUTH AND JAWS. A Practical Treatise on the Surgery and Diseases of the Mouth and Allied Structures, By VILRAY PAPIN BLAIR, A.M., M.D., F.A.C.S., Professor of Oral Surgery in the Washington University Dental School, and Associate in Surgery in the Washington University Medical School. Third Edition. Revised so as to incorporate the latest war data concerning gun-shot injuries of the face and jaws.

Compiled by the Section of Surgery of the Head, Subsection of Plastic and Oral Surgery, Office of the Surgeon-General of the Army, Washington, D. C. 460 illustrations. C. V. MOSBY COMPANY, St. Louis, 1917.

Preface to Third Edition. No surgical truth has received greater emphasis in this war than the necessity of correlating the skill and the knowledge of the general and the dental surgeons in the treatment of the combined injuries of the face and jaw bones.

An eminent authority on military surgery said, after the War of 1870-71: "I should not care to go through another campaign without having obtained competent technical assistance for those who have sustained injury of the face and fractured jaw."

The present revision is confined to the parts related to injury and sepsis and their treatment, and was done by the Section of Surgery of the Head, Subsection of Plastic and Oral Surgery; as an expeditious method of giving in a correlated form, the sum of the observations of the many workers abroad, to whose reports and recommendations, published, written and verbal, this section has access.

These were put forth in this form because, on the one hand, time did not permit of a full exposition of the subject in a special manual; while on the other, it would be of less utility and somewhat awkward to attempt to present these observations while disregarding the well-established principles on which they are based.

The subject of peridental infections has been rewritten by Dr. Arthur D. Black, of Chicago, and read by Dr. Thomas L. Gilmer. Most of the illustrations are furnished by Dr. Black.

The chapter on local anesthesia has been revised by the original author, and that on general anesthesia by Dr. Ellis Fischel. Because of insufficient time, the other chapters, not referred to in this preface, were not revised.

The abstracting of the war literature and much of the assembling was done by Captain Robert H. Ivy, Medical Reserve Corps of Milwaukee; while further reassembling and the reading of proof was intrusted to Captain Virgil Loeb, Medical Reserve Corps, of St. Louis.

The author has been collecting material for years for a general revision of this book, and certain matters referring to the repair of defects have been included in this revision, to which have been added some recent observations on cancer of the mouth.

VILRAY PAPIN BLAIR

Office of the Surgeon-General of the
Army, Washington, D. C.
October 20, 1917.

Major. M.R.C., U.S.A. In charge of
the Subsection of Plastic and Oral
Surgery, Section of Surgery of the
Head.

DENTISTRY IN THE BIBLE AND TALMUD. A Valuable Contribution to
the Early History of Dentistry, by DR. SAMUEL GREIF.

From the preface we learn: "The Talmud is a big, voluminous work written in the Chaldaic language about two thousand years ago. It is the Great Jewish encyclopedic work of knowledge, comprising the Jewish learnings and literature between about 200 B. C. E. and 300 C. E. It is the great reference book, employed for two thousand years, always rendering abundant material of both interest and value for topics of every description.

The contributions of the Talmud to the history of dentistry are entirely new to the English reading public. They have found no mention in any of our historical works heretofore published. The author wishes to present this treatise as an interesting and complete account of Dentistry in the Bible and Talmud."—WHO'S WHO DENTAL PUBLISHING COMPANY, New York.

"PYORRHOEA, CLINICAL SUBJECTS"

The booklet should prove very welcome to dentists who wish to make conditions plain to their patients and we believe it will fulfil its purpose which is set forth in the dedication: "To those of the dental profession through whose untiring efforts the standard of health of the nation is steadily advanced, these illustrations will prove helpful in supplementing educational talks to patients."

CORRESPONDENCE

AN ANSWER TO H. M. D.

In answer to H. M. D's letter in October number of the *DIGEST* giving advice to R. H. T. how to make good in shortest possible time practising dentistry in a city of 20,000 population: H. M. D., you surely have missed your calling. Whether you should have been a peanut vendor, a blacksmith, or a rag-picker, I do not know, but a dentist *Never*. Any man with a grouch, such as you have, could not fill a tooth for me, nor for any other sensible person the second time. I can see you, with a heavy hand, gouging into a tooth with a drill or chisel and watching with glee the patient jump and squirm and try to get away from you, and then giving it another dig, while remarking to yourself, "Well, he ought to learn to stand a little pain, anyway. It is good for him."

You say you fill your patients' teeth as you would have your own filled. I'll bet a \$4.00 dog you would not have your teeth filled by a man with a grouch such as you have—not if there was another dentist within 40 miles. You would let your teeth rot out first.

After eight years' practice you are \$200 worse off than when you began. You say you are going to quit as soon as you are financially able to engage in other business. Why not quit now? You say you have been going in the hole all this time. Then for your own sake and for the sake of suffering^h humanity *Quit, Quit* to-day; don't wait another minute. Try and save what you have left before it is too late or you may not be able to buy even a peanut stand. .

You say you are an ethical dentist, but you pride yourself on the fact that you do not belong to any Dental Association. Now did it ever occur to you that you might learn something by associating with other men of the profession, men who are doing things and who take pride in their chosen profession? There are men who have a love for their work. You will find those men are making a success financially. They are hard workers and students. They are looking for and learning something new all the time. They are trying to do better work and using methods to save their patients pain. Are you using analgesia, conductive anaesthesia, desensitizing pastes, or any other method to relieve your patients from pain? No, I dare say you pride yourself you are not taking up any of those new-fangled ideas to fool the people. Maybe that is one of the "fairy stories" you refer to.

If you look around you and size up the situation, you will find just as many failures in the peanut business, grocery business, law business, or any other business as in the practice of dentistry. Statistics show over

90 per cent. of those engaging in any business are a failure. It is only the man who loves his chosen work and is willing to dig who makes a success.

You will find the percentage of those practising dentistry driving good cars equal to or exceeding those selling peanuts. Then why advise R. H. T. to sell peanuts?

You pride yourself that you have kept at least a dozen young men from studying dentistry. Who are you, "a man with a grouch," that you should set yourself up to advise a young man against dentistry—a profession that presents more possibilities for making good than any other? Statistics show that over 90 per cent. of the people, young and old, need the service of a dentist. Physicians are telling their patients they must have their teeth fixed if they want to regain and keep their health. Newspapers and magazines all over the land are publishing articles about the care of the teeth, telling people why they should place more value on the teeth. In many cities and towns Oral Hygiene is being taught in the schools. Lieutenant Colonel Clayton, of the Canadian Army Dental Corps, says that the teeth of 98 per cent. of the recruits are defective and that 50 per cent. require immediate attention. Our own Government finds the same condition. There is work everywhere for the dentist—not one-tenth enough men to do the work that is needed right now. Where can you find any other profession that is not crowded? Where can you find another profession that has so much need of men?

I, too, met a man like you, who had a grouch and who advised me not to take up dentistry if I wanted to live. Said if he had a boy who insisted on studying dentistry, he would knock him in the head; said half of the dentists in this country were not making a living. Tried to discourage me in every way. I wanted him to let me go into his office to learn dentistry. (Thank the Lord I did not go in with such a man.) There was no college near at that time. However, I looked around and found those engaged in other businesses were making a failure and only very few were what you might call successful. I concluded because some men were making failures, that was nothing against dentistry. Finally I found a man who liked dentistry, said it was a good business, advised me to take it up, and would take me into his office and teach me his way of doing dentistry. I paid him for that privilege.

You say you are thirty-three years old and don't see how you can stay with dentistry more than two years longer. I was thirty-four years old when I went into that office; had a family, wife and two children; was \$1,500 in debt. I worked in that office two years, then entered Dental College. With my wife's help, I worked my way through college. She came into the office as attendant. I did laboratory work at night. I

liked my work from the start and still love my profession. Did over \$3,600 business the first year after graduation; \$6,500 the second year. A man in a large city, with hard work and business ability, should be able to do from \$6,000 to \$12,000 gross business per year.

I am an ethical dentist; joined the Dental Association the first month after graduation; belong to three dental societies now. I find I can always learn something from the other fellow.

Now my advice to R. H. T. How to make good, is this: Love your work; (if you do not, get out of it). *Dig. Do good work and please your patients.* Make them boosters for you. *Study hard.* There is lots to learn. Don't try to advertise yourself by making a denture for a lady that every one can tell the minute she opens her mouth she has false teeth, but try to make them so natural looking, her own husband will not know they are false unless he sees them in a glass of water at night. Don't advertise your work by putting a gold crown on an anterior tooth or putting in a porcelain crown that is too white—has no more resemblance to the tooth than a piece of putty. Take time and care and put in a tooth so perfect in shade and form that you yourself cannot tell it is false without taking a glass and looking at the back of it.

If you have a nervous patient whose teeth are very sensitive, don't try to make him stand the pain. That won't help you and is bad advertising. Use some obtundent or anæsthetic. Do the work without pain. Make every patient an advertiser. They will bring in their relatives and friends. They will lead in their acquaintances and go out and drag in strangers who need your services. That is the best kind of advertising and at the end of the month there will be no bills for printers' ink

Do your work well and charge a good fee. Tell your patient what you want to do for them. Show them samples of work. Don't try to sell a person dentistry they cannot pay for. Remember, many buy Fords (they are good cars for the money); others buy Packards or Cadillacs or Hudson Super-Sixes. Why? Because there is a difference in appearance and finish, and some are able and willing to pay. Give them what they want.

Have a lady attendant in your office. Keep it neat and clean. Keep yourself and equipment up-to-date. Do your work with as little pain to patients as possible. Be pleasant. Smile, no matter what happens. Do not worry about your competitor across the street who makes a denture for \$4 or a crown for \$2.95, puts in a filling for 50 cents and up, or extracts teeth free to get other work. Maybe he has to do that to get any work. Maybe he has a *grouch*.

No young man should take up the study of dentistry because he thinks it an easy way to make a lot of money. It requires hard work and

study and an aptitude for the work to make a success, or to make any money. It requires the same in any other profession or business—even selling peanuts.

As I said before, dentistry to-day and for the next several years offers the best opportunities for a young man of any of the professions. But there is no place for a grouch or one who wants an easy snap. Dentistry also requires some business ability as well as the ability to do the work. There is nothing wrong with the financial end of dentistry; the trouble is with the man practising it.

H. M. D. having challenged the dental profession, I take pleasure in refuting his reasons for the advice he gave R. H. T., hoping some of the young men he and others like him are trying to discourage in the practice of dentistry, may not let such talk influence them.

Yours very truly,
D. S. G., D.D.S.

NATIONAL LICENSE PLAN FOR DOCTORS

HIGHER STANDARDS FOR ADMISSION TO PROFESSION ALSO PART OF BOARD'S PURPOSE

Some day dentistry will follow suit.—*Editor.*

The National Board of Medical Examiners will meet at Cornell University Medical College and frame higher standards of examination for admission to the medical profession, and at the same time make it possible for successful candidates to practise in any part of the country without being compelled to take State examinations.

Legislation recognizing the sanction of the board, has been enacted in fourteen States and twelve others await formal enactment of similar laws affecting examination for licenses. These are intended for private practice, but successful candidates will have the advantage of the board's sanction should they desire to serve in the army or navy.

The board comprises Rear Admiral J. C. Braisted, U. S. N., Chairman; Surgeon General W. C. Gorgas, U. S. A.; Medical Director E. R. Stitt, U. S. N.; Surgeon General Rupert Blue, United States Public Health Service; Assistant Surgeon General W. Rucker of the same service; Col. Louis A. La Garde, Major Isadore Dyer, Major H. D. Arnold, Major Victor Vaughan, Dr. Henry Sewall, Dr. Herbert Harlan, Dr. E. Wylls Andrews, Dr. L. L. Wilson, Dr. Walter L. Bierring and Capt. J. S. Rodman, Secretary of the Board.—THE NEW YORK WORLD, January 9, 1918.

PRACTICAL HINTS

[This department is in charge of Dr. V. C. Smedley, 604 California Bldg., Denver, Colo. To avoid unnecessary delay, Hints, Questions, and Answers should be sent direct to him.]

TO GET A CAST UPON WHICH TO REPAIR PARTIAL PLATES.—A sheet of modeling compound which has been heated is laid on flat surface (Glass or Lab. Bench) and the plate parts are placed with their occlusal surfaces downward and pressed into the compound bringing the fractured edges in proper relation, and making cast as usual.

This method does away with the old method of waxing fragments together, with its attendant uncertainties. If the modeling compound is retained intact until the repair is made, it will serve as means of knowing your plate is going to fit, other things being equal.—R. C. BOYD, Fort Lupton, Colo.

I found some difficulty in removing hot instruments from the tray of my electric sterilizer. I do not have time to wipe the instruments, one set is always in the sterilizer until about ten minutes before the next patient takes the chair. I purchased at the ten-cent store a short-handled pancake turner and bent the blade slightly so that when it was slipped under the instruments on the tray, they would stay on. They are then placed on a towel on the sterilizer stand and by the time the next patient enters they are dry, and the second set is placed in the sterilizer. This addition to the sterilizer may be nickel plated and no one would ever know its original use.—S. M. HUNT, D.D.S., Port Chester, N. Y.

FOR INVESTING MY BRIDGE MODEL FOR SOLDERING.—I find no stronger nor safer investment than a few shreds of asbestos (can be purchased shredded) which is added to the regular investment material of one third marble dust or sand, and two thirds plaster. This fibre of asbestos unites with the model and prevents cracking. It will not be necessary to use wires.—S. M. HUNT, D.D.S., Port Chester, N. Y.

Question.—Before running my vulcanite cases through, I coat my models with liquid silex, weakening the silex as I get it from supply houses, with half water. Have difficulty in removing silex from finished denture. By coating with olive oil and leaving over night silex comes off easily but cannot always spare that much time.

Can you tell me any faster way or is there any model dressing better than silex?—C. M. H.

ANSWER.—Dust talcum powder over cast after painting with silex and wipe off with cotton or soft cloth. Another good way is to rub ordinary stove blacking onto the cast until it presents a glossy black surface. Or carefully burnish No. 4 tin foil on to the cast with a wad of cotton and the fingers; then soak plate for an hour or so in 50 per cent. muriatic acid to remove the after vulcanization.—V. C. S.

Question.—Would you please be kind enough to suggest to me, the name of some text book, that deals with treatment and care of deciduous teeth.—A. D. N.

ANSWER.—Not much has been written; however you will find a valuable chapter in the second volume of Black's Operative Dentistry. Also a valuable section in Fones' Mouth Hygiene. And in the Dental Cosmos September 1917 a very valuable article by Percy D. Howe of the Forsyth Institute.—V. C. S.

Question.—I have noticed where you have been giving good suggestions through the pages of THE DENTAL DIGEST to those who have had some difficult cases, and it is with pleasure that I am throwing another at you. I have exhausted my professional skill trying to get a good result with the following case.

A male patient of mine has lost the upper right and left second and third molars, also the lower right second and third molars. Two years ago these teeth were perfectly sound and tight, they began to get loose one at a time, and fall out, and since he has been my patient I have scaled the teeth in good shape, found deep-seated pyorrhea pockets beneath the free margin of the gums, of the upper left 2nd bicuspid, the upper right six-year molar, and the lower right six-year molar, these teeth are very loose and have not improved any that I can see under my treatment. I have used everything I ever used before with good results in the first stages of pyorrhea, such as H_2SO_4 , Iodine, Emetine Hydrochloride, Ferhanspyerrhea, astringe, etc.—Please remember the gums are normal, and were when I took the case, the teeth are vital and sound.

Doctor if you can throw any light upon this case that will aid me,

please write as soon as possible; also answer in the *DIGEST*, as it might be a help to others.—H. D. O.

ANSWER.—I presume you realize how nearly impossible it is to answer a question such as you ask with any great degree of accuracy. It is often hard enough to diagnose such a case satisfactorily when the patient is at hand. My first impression is however that you have over medicated this case. In the treatment of pyorrhea little or no medication should be the rule. Thorough scaling without scratching or grooving roots and subsequent daily cleansing and massage of the gums both with tooth brush and fingers. I think very likely however that these teeth were hopelessly sick when you started to treat them. It is a wise rule to follow never to attempt treatment of a pyorrhea tooth that does not have more than one third of its normal bony attachment. If it has as much as two thirds normal attachment, except possibly very rarely, you are at fault if you do not get results. If this patient loses these teeth that you have scaled and treated, examine them carefully to see how successful your scaling has really been.—V. C. S.

Question.—In response to H. R. S. for an easy and good way to make an open full crown, I would suggest the following.

With a separating disc make four incisors in the form of a square approximately to the desired width of the opening on the facial side of the crown (being very careful not to cut beyond the limited area). Cut out this square with the crown shears following the incisors. Trim the sides and corners of the opening with a large dull fissure bur to the desired size.

Try the crown on the tooth and with the gold mallet using a foot plugger, adapt the sides of the crown to the tooth. Finally use a sand-paper disc to give the sides a knife edge. This would give a very desirable crown.—L. T. F.

ANSWER.—In my opinion there may be easy ways but there is no good way to make an opened-faced crown; in other words unless it be with the possible exception of the lower cuspids, whose comparatively large roots and small crowns make an accurate fitting possible, they are always poor dentistry and should never be made. I have seen more bridges loosened up; teeth that were sound but a few years before, undermined with decay, practically disintegrated, with exposed nerves, etc.; under open-faced crowns than under any other form of abutment.—V. C. S.

OFFICE EXPERIENCES

[I shall be glad to have *bona fide* Experiences from dentists for this department, and for each experience accepted for publication, the DIGEST will send the writer a cheque for \$2.00. The articles need not be lengthy.—EDITOR.]

HER INDECISION WAS DECISIVE

Summer school was at hand and the teaching force had been reduced to such an extent that an instructor was often obliged to take a pot-shot at something outside of his department. Thus it came to pass that one day I was called into the extraction room to examine a patient. Fortunately for the patient the nurse had given me no advance information and I entered the room in perfect ignorance as to whom I was to examine.

The patient was already seated in one of the dental chairs. She was a woman of about forty-five, above the average in height, and with a rotundity of figure like that of a well-filled gunny sack. As to complexion she was as black as a stick of India ink, and through that Stygian blackness gleamed a pair of beadlike eyes that sent little shivers down my back. But even more disconcerting than her eyes was a pair of enormous arms at which I instinctively shied, for I still remembered enough of my Anatomy to recall that within those masses of adipose tissue lay two biceps muscles powerful enough to fell an ox. Should I, a dentist of the featherweight class, place myself at the mercy of anything so formidable? Might it not be possible that those muscles would receive a stimulus which would cause them to contract into a fearful upper-cut?

The desire to serve humanity finally got the better of my fears however, and I stepped up to the chair, pried open the patient's mouth and peered into it. An upper third molar was badly decayed and abscessed and I advised immediate extraction. The woman began to remonstrate.

"But, doctor," she pleaded, "I thought you was a gwine to fill dat tooth. I dassen't have it pulled."

I explained to her the uselessness of having it filled and assured her that she would have nothing to fear from an extraction because I would inject Novocain.

"What's dat?" she asked, "am dat de same as a hypodermic?"

When I told her that it was, her two little eyes flashed fire. "No

sah, you cain't fool me! I cain't stan' no hypodermic. Las' month when I'se sick in de hospital a physician tried twice to give me a hypodermic, an' I jest couldn't stan' it."

I saw that it was useless to remonstrate so I told her that I could give her gas and remove the tooth while she was asleep. At first she was somewhat mollified but presently a new thought came to her.

"Doctor, I'm 'fraid I cain't stan' gas. It takes six men to hold me, I'se dat nervous."

I replied that I could easily find six husky men, and when she saw that there was no way out of it, she glanced around the room to make sure that no one could overhear the conversation, then she lowered her voice in a confidential whisper.

"Doctor," she said, "I jest cain't stan' gas. It takes six men to hold me. I ain't jest right in my head. I was in de 'sylum six weeks an' de 'sylum dentist tried for to pull dis same toof, an' Lawdy, I jest shoved him aside and jumped frough de window an' nevah went back. No sah! I jest cain't stan' gas, an' my toofache am about done gone now anyhow, so I guess I'll jest mosey along home an' come back some udder time."

L. W.

A UNIVERSAL DENTURE

I was located in a small eastern Iowa town in 1902 when I had this happen to me. Being fresh out of school at the time—that is to say rather fresh, having graduated a couple of years before—I removed to a small Iowa town where the preponderance of the population or the parents were from Ireland. Like all new comers to a town I was looking for work but my first case presented difficulties that I had not been taught to overcome while in school. It was about ten o'clock in the morning when the door to my reception room opened and an old Irish woman entered whom I will call Mrs. Murphy as that was not her name. She reached into an old hand bag and extracted a plate which she handed to me saying, "Docther can yez fix this fer me, plaze?" I took the plate from her and upon examining it I found that it was broken in about a dozen pieces. I told Mrs. Murphy that it was past me, the damage was too great to be fixed and she would have to have a new plate. The old lady exclaimed in a heart-broken voice, "Phat will I be after doin! Shure the teet don't belong to me but to me naybur Mrs. Hennessy and I had borried them to go to a funeral wit! You see Docther whin Mrs. Hennessy wants to out to a funeral or some place like that she wears the teet, if I want to go I wear the teet." I said to her: "Mrs. Murphy, do you tell me that this plate will fit both of you. Mrs. Murphy said it did. It seemed to be a habit with these two old ladies to borrow this plate when-

ever either one of them wanted to go out in "sassiety." Can any of you dentists beat this?

R. B. M.

A BUNCH OF KEYS

The second year I was in practice I lost \$500.00 thru bad credits, and my dear wife made over her dress. We saw one of those patients go by in a Ford which we couldn't *afford*. I now have a neat little sign written by my self "Deposits required as we use precious metals." I look at the sign and rattle a bunch of keys in my office coat. That bunch of keys have brought in \$5000.00 cash in the last nine years. I beat the patient with the Ford in my Cadillac Sunday morning and whistled all day long.

A. F.

A "CRUSHING" LETTER

"*Sir*: I must confess I was not a little surprised on receiving your dun. For I am quite certain when accounts would be settled, you would be the *Debtor* by *Considerable*. The injury that you inflicted on my head. Well the Pain, Cost of Medicine, and the loss of my time in my household duties and disappointment in getting my work done well. Now there should be justice. I will say it was a fair case *Malpractice*. But I would not take an action on a neighbor. As one Dr. remarked, you do not want your head used as an experiment. My head is badly *Strained* and the veins Bruised over the *Brain*. And only time will tell to what extent it is injured. It is sore and very painful at nights. I have been kept home now seven weeks to-day, not able to hardly give the teeth a thought.

"There was no earthly *Excuse* for your *Crushing* my head in that way, all people that I have talked to say it was unheard of, or a *Cold Blooded* action. You may reply, but it will be useless to ask me to pay \$15.00 for those teeth, and being *Maimed* and by you unnecessarily."

L. S.

HARD SOUP

DEAR SIR:

Mrs. Samp eat some well cooked chicken soup last week, and another tooth came out, and she swallowed it, never know when it came out, till she swept round her teeth with her tongue. Now, Doctor, we cannot call them good teeth. We could of had good teeth for \$12.00 but we paid you \$22.50 to git good teeth. She wore her old teeth 20 years and never a tooth came out and until she had them wore out and she Can't always

come down 43 miles to git teeth fixed, and she can't git along without teeth. Now if you can't make her good set of teeth that will "ware", will you please pay us the money back. Please let us know by return mail.

Yours truly,

NEB. R. I.

P. S. It is the tooth on the left side before it was on the right side.

A SHOCK ABSORBER

The experience of L. J. C. in November number of DENTAL DIGEST reminded me of a recent office experience.

A big, jolly, husky man, around seventy and an old sea captain, was visiting friends in the town where I practised and having trouble with a tooth entered my office one morning and asked to have the tooth filled. I prepared the tooth which was upper left first molar and filled it.

When I had finished he said "Now doctor did you fill that tooth right? You didn't put no cotton in it! Now my dentist in—, had him for last twenty years—always puts cotton under the fillings because he says it prevents jar on the nerves while chewing and acts as cushion."

I tried to explain the danger of infection from cotton left in a tooth indefinitely and he left the office partly convinced. He said that he would give my filling a try anyway.

H. I. F.

A SIMPLE METHOD FOR RECEDING GUM PREPARATORY TO GRINDING ROOT FOR RECEPTION OF PORCELAIN CROWN

By F. E. JUDSON, D.D.S., ANTIGO, WIS.

Take a piece of heavy band rubber and with the Rubber Dam Punch, punch a hole somewhat smaller than the root to be crowned, now trim the rubber in the form of a small band and slip the same on root, allow it to be worn two or three days, and you will find gum receded as high as it is necessary for crown to go. By using this method there is no occasion for laceration of gum margins. If root should be too short to apply rubber band, you may build it down by the use of a little cement packed around a small wooden peg inserted in root.



THE BEST OF CURRENT THOUGHT

(*The Dental Cosmos*, January, 1918)

Original Communications

- The Principles of Black's Cavity Preparation. By R. R. Byrnes, D.D.S.
The Histological Pathology of Alveolar Abscesses and Diseased Root-ends. By Kurt H. Thoma, D.M.D.
Electrobiolytic Theory of Dental Caries: Observations on the Presence of Galvanic Phenomena in the Mouth: with an Annotated Commentary on Related Topics. By Paul R. Manning, D.M.D.
Logical Asepsis in Dental Practice. By J. R. Callahan, D.D.S.
Movement of Teeth Predetermined by Engineering Instruments: Appliances Designed in Accordance with Analytical Mechanics. By Frederick L. Stanton, D.D.S.
Orthodontic Treatment of Advanced Cases, and Patients Coming from a Distance. By J. A. Cameron Hoggan, D.D.S., L.D.S.
Iodo-Glycerole. By Eugene S. Talbot, M.D., D.D.S.
A Dental Anomaly: Report of a Case of a Rudimentary Impacted Lower Third Molar. By Harry J. Feldman, D.D.S.

Correspondence

- *Sterilization of Tooth Tissues with Silver Nitrate.
Unclean Yet Sound Dentures.
Dentistry as a Career.

Editorial Department

- *A Professional Appeal.
Bibliographical.
Review of Current Dental Literature.
Periscope.
Hints, Queries, and Comments.

STERILIZATION OF TOOTH TISSUES WITH SILVER NITRATE

TO THE EDITOR OF THE *Dental Cosmos*:

Sir: The article entitled "A Method of Sterilizing, and at the Same Time Impregnating with a Metal, Affected Dentinal Tissue," by Percy R. Howe, A.B., D.D.S., in the September *Dental Cosmos*, I found to be extremely interesting. May I sound a word of warning, however, in regard to the use of silver nitrate in the roots of anterior teeth? I have

several patients for whom I treated anterior roots, prepared for pivot crowns, with silver nitrate some ten years ago. Subsequently the gum tissues over the roots darkened as the result of the impregnation of the silver salt, causing a most disagreeable impression, and for that reason I discontinued its use in these teeth. I have found silver nitrate very effective when applied to affected tooth tissues which are not exposed to light, as advised by Dr. Black, but even if applied only to the apical third of anterior roots, the danger of staining the crown of the tooth, with its attendant disastrous results from an esthetic point of view, more than offsets the benefits derived from its use in these places.

Very truly yours,

WM. H. NITZSCHKE, D.D.S.

Rio de Janeiro, Brazil.

(*Dental Items of Interest*, December, 1917)

Exclusive Contributions

Cases in Practice. By C. Edmund Kells, D.D.S., New Orleans, La.

Bones and Bones of Contention. By Lillian E. Kiel.

Orthodontia

The Teeth in Superstition and Magic. By Charles Channing Allen, D.D.S.

Discussion on the Paper of Dr. Allen.

Teaching of Orthodontia from the Standpoint of the Student. By William C. Fisher, New York City.

Discussion on the Paper of Dr. Fisher.

Exodontia

Exodontia. By Dr. Carl D. Lucas

(*Dominion Dental Journal*, December, 1917)

Original Communications

Ulcerative Stomatitis. By Capt. V. C. W. Marshall, London.

The Relation of Diseases of the Eye to Those of the Teeth. By L. DeV. Chipman, A.M., M.D.C.M., St. John, N.B.

Points of Interest Concerning the Army Dental Corps in One End of Canada. By Capt. J. M. Magee, St. John, N.B.

Editorial

Give the Returned Soldier a Chance to Become a Mechanical Dentist or a Graduate Dentist

Power Given to the Quebec Board to Rescind a By-law.

The Family Dentist.

Combating the Improper Dental Advertiser.

Editorial Notes.

Book Reviews.

(*Oral Hygiene*, January, 1918)

Dental Treatment in a Prisoners' Camp in Germany. By M. Raymond, Paris, France.
Fords and Packards Parked at the National in New York. By J. Crimen Zeidler, D.D.S.,
New Orleans, La.

Faulty Enamel as a Predisposing Cause of Pyorrhea. By Geo. R. Lindsay, D.D.S., Denver,
Col.

What the Chu-Chu Engine Teaches. By John Philip Erwin, D.D.S., Perkasié, Pa.
In Reply to an Editorial—"Dental Hygienists." By A. E. Christis, D.H., Boston, Mass.

War Dentistry. By First Lieut. C. Speakman, D.O.R.C., U.S.A.

The Navy Dental Corps.

The Welcome Man.

Progress and Dentistry. By Wm. Oleon, D.D.S., Pittsburgh, Pa.

The Dental Reserve Corps.

Correspondence

Editorial

*Industrial Dental Dispensaries

Lest We Forget.

Report of Eastman and Forsyth Tablet Fund.

INDUSTRIAL DENTAL DISPENSARIES

It would be interesting to know the exact number of free dental dispensaries in the schools, asylums, and penal institutions of the country. Nearly every week we learn of new ones established or in contemplation. The Industrial Dental Dispensary is a new development and we present herewith a fairly accurate and complete list. We would be pleased to have our readers correct any mistakes; also inform us as to firms planning installation of dental dispensaries. The first industrial dental dispensary in America, so far as our records show, was that of the Armstrong Cork Co., Pittsburgh, Pa., established in 1911. This is unique in that it furnishes artificial dentures, crown and bridge work, as well as operative dentistry free to its employees. A number of other establishments render free services in part or, as in the case of the Colorado Iron and Fuel Co. and the Pocahontas Coal Co., free services to the children of their employees. The majority of industrial dental dispensaries render services at cost or less and allow their employees to pay for the same in weekly installments.

The Alameda Co., Oakland, Calif.

The Amoskeag Mfg. Co., Manchester, N. H.

The Armstrong Cork Co., Pittsburgh, Pa.

The Avery Co., Peoria, Ill.

The Bailey Company, Cleveland, Ohio.

The Bausch & Lomb Optical Co., Rochester, N. Y.

Bloomington Bros., New York City.

Chicago Telephone Co., Chicago, Ill.
Cincinnati Milling Machine Co., Cincinnati, Ohio.
Colgate Co., Jersey City, N. J.
Colorado Fuel & Iron Co., Colorado.
The Crane Co., Chicago, Ill.
Dress and Waist-Makers Union, International Garment Workers. New
York City.
T. Eaton Company, Limited, Toronto.
The Emporium, San Francisco, Calif.
Filene Co-operative Association, Boston, Mass.
Firestone Tire & Rubber Co., Akron, Ohio.
Forbes Lithographic Co., Chelsea, Mass.
B. F. Goodrich Co., Akron, Ohio.
H. J. Heinz Co., Pittsburgh, Pa.
D. H. Holmes Co., New Orleans, La.
J. Hood Rubber Co., Watertown, Mass.
Inland Steel Co., Indiana Harbor, Ind.
Joseph & Feiss Co., Cleveland, Ohio.
Kimberly, Clark Co., Neenah, Wis.
Larkin Co., Buffalo, N. Y.
Lord & Taylor, New York City.
Macy Mutual Aid Ass'n, New York City.
James McCreery, New York City.
Metropolitan Life Insurance Company, New York City.
Montgomery Ward Co., Chicago, Ill.
N. Y. Telephone Co., New York City.
Pocahontas Coal Co., West Va.
Schrader & Sons, Brooklyn, N. Y.
Sears, Roebuck & Co., Chicago, Ill.
Tennessee Coal & Iron Co., Birmingham. Ala.
Wanamaker Store, New York City.



A METHOD OF STERILIZING, AND AT THE SAME TIME IMPREGNATING WITH A METAL, AFFECTED DENTINAL TISSUE*

BY PERCY R. HOWE, A.B., D.D.S., BOSTON, MASS.

(Continued from January Digest)

TREATING CHRONIC ABSCESS

(IV) *We have found this treatment effective in chronic abscesses.* In the treatment of these cases we do not hesitate to work the material into the abscess itself by way of the root-canal. At no time have I seen any indication of disturbance following such a procedure, but in all cases the treatment has been markedly effective. As yet we have not had to remove any of the teeth so treated, and they have been the discards of a large clinic. Some of our efforts have not been wholly successful, but a radiograph has usually disclosed the cause, showing that we were not able to reach the abscess; but in all cases it is safe to say that there has been

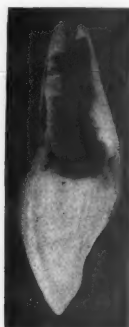


FIG. 6.

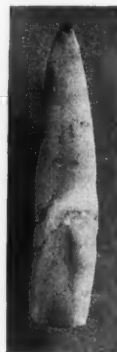


FIG. 7.

Showing it to be possible to use this method in anterior teeth. No discoloration of crowns.

great improvement. This may be seen from the description of the cases that Doctor Burke has treated, which is included in this report.

In the use of this treatment in chronic abscesses it may be well to use as an adjunct to it some more continuous mode of sterilization. The action under this method is immediate and complete. An abscess, or an inclosed or encysted area responds curatively to ionization. Those

*The substance of this paper was presented in the form of a lecture before the Pennsylvania State Dental Society, Philadelphia, June 26, 1917.

preparations that give off formaldehyd or induce some more penetrating or continuous method of sterilization are valuable aids in such cases.

Before this is discussed further, notice from an examination of our slides what occurs in a vital tooth in an inflammatory condition of the pulp or of the pericementum, more frequently in chronic than in acute cases. Usually a so-called acute crisis is the result of a chronic condition. Long-continued irritation of the pulp, even if in a mild form, eventually results in the death of the pulp, and then comes the acute abscess, which when neglected relapses into a chronic abscess. Ground sections of teeth so affected, abscessed or pyorrhetic teeth, show distinct hyaline areas throughout the dentinal structures. This is indicative of degenerative action. In these hyaline areas the dentinal fibrils are few and far between, as shown in the illustrations. This fact if ever noticed before, has never been enlarged upon. So, too, where pulp irritation has been of long standing the dentin is affected. While this hyaline condition of the dentin is undoubtedly a degenerative process, it is at the same time a protective one, for it stains only where the fibrils exist. Just previous to the actual hyaline state the dentin undergoes an alteration under which it stains deeply. We are extending our studies upon these internal tooth changes, and in another paper shall give a fuller account of them.

If you will examine the teeth that we have treated by this method you will see that the sound tissue is not affected, while the unsound is black with the silver impregnation. Some of these teeth were treated in the mouth and then extracted. The sound tissue seems to be unaffected. (See Figs. 1, 2, and 3.)

In practice we attempt to fill the canals of pulpless teeth—although the X-ray shows that in a large majority of cases we do not—but no or comparatively little attention is paid to the dentinal structure. These sections show that the alteration is extensive; that the silver fills this affected dentinal structure. Our bacterial examinations show that the tissue is sterile when thus treated. Hyaline areas are sealed by nature, so that we feel we are demonstrating important facts in tooth treatment.

In the ground sections of teeth that we present here, deep penetration of the tubuli is seen. A distinction must be made between the laboratory tooth and the living tooth, for the one is not vital, while the other is, and contains normal serum and moisture. It is at times possible to stain a laboratory tooth that apparently is sound, while in all the teeth we have treated and then extracted, the healthy dentin has not been stained.

From what has been said it is evident that in chronic abscesses, so far as the root-canal and dentinal tissue are concerned, this treatment is immediate and effective. When worked directly into the abscess nothing but good results have been observed so far as our studies show; but if

there is a sac of serous matter it should be drained, washed with Dakin's solution, and resolution awaited before it is finally filled. Some of our



FIG. 8.



FIG. 9.



FIG. 10.

Illustrating the manner in which the solution finds its way to the very end of the root, even when the broach is unable to reach it.

investigators have endeavored to show that they cannot get an abscess sac sterile. We should hardly expect to do this clinically at one operation. We have to remember that anything that destroys the bacteria destroys the living tissue. We may wash a wound free from detritus of many kinds, we may reduce the number of bacteria by various solutions and we may incite a healthy healing process so that shortly the wound becomes bacteria-free. This is about what we are to expect in dental abscess treatment. The forces of immunity and of resistance are fully as much to be considered as the mere presence of the bacteria. I believe that ionization is frequently an excellent accompaniment of this method that I am recommending, for it induces a healthy action in tissue, and reaches farther than we are always able to do with this treatment.

These cases should be kept under observation, and the permanent filling not too hurriedly inserted, not because of the tooth itself, for the affected tooth structure is sterile and impregnated with the silver, but on account of the abscess sac and the peridental membrane, which require a little time for return to normality.

TREATING APICAL AREAS

(V) *Application of this treatment to the region of the apices of tooth roots.* When a pulp is removed under conductive or infiltrative anesthesia no one can say at what point it will be torn off. The elastic pulp tissue

may break short of the apical foramen. There may be several foramina, and several shreds may be left. The break may occur and the elasticity of the tissue draw the point of breakage outside of and beyond the apical foramen. Any of these are annoying conditions, and a source of discomfort to the patient, frequently of long duration. The application of this treatment disposes of the first condition, and is an aid in the second.



FIG. 11.



FIG. 12.

These are sound teeth from patients twenty-two and twenty-five years of age respectively. The dentinal structure is white, opaque, and uniform in appearance

From what we may see from the ground sections in the laboratory and from the clinical evidence that we have, the treatment is ideal in any apical work. In the case of the many foramina, they are rendered sterile and are filled. One tooth with five foramina shows the silver in every one. In the case of crooked and of very fine roots the silver goes to the very end, as may be seen in the illustrations. The silver has gone through in some cases, but nothing but good effects have been observed. When penetration does occur it is not similar to the penetration of gutta-percha.

The treatment of root apices is a delicate matter, in my opinion. Examination of the tooth sections that we have prepared will show that in the teeth of the adult a limited hyaline condition very frequently exists in this region. This may be more or less extended without any noticeable pathological features. In the case of the chronic root abscesses there is an extended hyaline area, occurring not alone at the apex of the root but here and there throughout the tooth, although more especially toward the end of the root.

What the X-ray may disclose we are not prepared to say—we have not sufficiently studied this histological change; but the fact that such a change does occur should be borne in mind in interpreting the radio-

graph. We have seen revealed by radiography failures in attempts to fill root-canals. That these were not filled was not known by the patient.



FIG. 13.

Showing a small cervical cavity. By transmitted light the disintegrating effect may be seen reaching to the pulp. A close examination shows a dentinal alteration. The posterior portion of the tooth is affected more or less throughout its length. This may be seen along the upper part of the root. At the apex a distinct hyaline area exists, as with the sound teeth in the previous figures.

or by the operator. In many such cases the tooth has been useful, comfortable, and physiologically tolerated. On the other hand we have taken out with the fingers loose teeth from about which pus was discharging, and from which an eighth of an inch of gutta-percha was protruding through the apical end of the root. We have also removed from a fistula a pellet of gutta-percha that had been forced through the root-end. Nature is wonderfully tolerant, but we can see no reason for forcing gutta-percha into tissue beyond the root-end. Such a foreign mass is only an irritant, and disturbs the natural arrangement of vessels, nerves, and tissues; it interferes with the natural circulation. The tooth at its apex is tapered, often translucent, as I have shown by sections, and the adjustment between this and the alveolus is delicate.

When there are several foramina, why should a gutta-percha point forced into the adjacent tissues an eighth of an inch, passing between all these natural connective openings, be considered a therapeutic measure? It is well to keep away from the apical region with mechanics. The treatment that we are advocating has at least some elements that are in harmony with modern biological principles. The enlarged apical ends of the developing molars of the child present no difficulties that cannot be safely remedied by this treatment, if we are to judge from the subsidence of inflammation and the return to apparently normal state that follows its use.

DESENSITIZING REMAINING PULP SHREDS

(VI) *Disposes almost painlessly of the remaining part of a pulp after the death or removal of a portion of it.* Another place where this method is serviceable is in the case of a vital pulp shred that remains in one root-canal, while in the others the pulp is dead. These living shreds are dif-

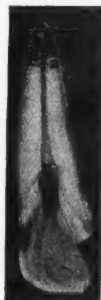


FIG. 14.



FIG. 15



FIG. 16.

FIG. 14. Note the cavity extending to the pulp. Note dentinal alteration, also the hyaline condition at the apex. This tooth had abscessed.

FIGS. 15, 16. These show a similar dentinal alteration. The teeth were firm in the jaw, but were removed with others.

ficult to get rid of. By this method one is able almost painlessly to dispose of this sensitive pulp tissue. If slight pain is felt when the ammoniacal silver nitrate is applied, follow it immediately with formalin, working it down the root-canal, when the pain will cease. Pressure with a rubber pellet is sometimes a very good way to force the liquid down the canal; the pulp will be sterile and stiff with the impregnation of the silver.

USE OF SILVER NITRATE SOLUTION FOLLOWING APICOECTOMY

(VII) *A still further application of the principle of dentinal tissue impregnation in the treatment of the tooth stub after apicoectomy.* Doctor Shuman, after examining the tooth sections and the effect of this method in other cases, applied it following apicoectomy for the purpose of sterilizing the remaining dentin and sealing it against serous exudates following the operation, and reports that he has had no trouble since its use. Previous to its use an occasional swelling would occur some time after the operation.

There are questions that naturally arise in the consideration of this method, some of which we shall attempt to answer here. One of the first

that occurs is: Does this treatment discolor the teeth? It renders them jet black wherever the silver deposition takes place. This is certainly



FIG. 17.



FIG. 18.

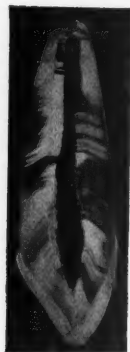


FIG. 19.

FIG. 17 shows abscessed tooth in which the crown was broken in grinding. Figs. 18 and 19 show pyorrhetic teeth. Note in Fig. 19 that both the pulp and the pericementum have taken part in this dental change

an objection to its use, and limits its employment. It will enter any defective tooth structure, but does not seem to penetrate sound tissue, as we have said.

The method was evolved particularly to save posterior teeth; the first molars especially, nearly all of which are affected in a large clinic like the

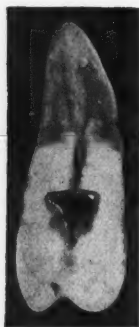


FIG. 20.

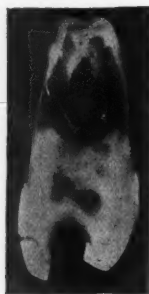


FIG. 21.

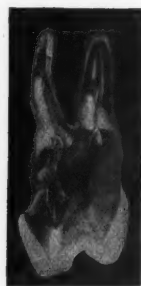


FIG. 22.

Showing localized areas where the dentin has become completely hyaline, with the dentinal fibrils to be seen. These areas will not take stain. They are absolutely sealed

one at this institution. The treatment had to be prompt, simple, and efficacious—and so far it seems very successful. Here the color did not matter so much, but breadth of application was needed, and we have therefore worked out the following method for treatment of anterior

teeth. The root-canal is enlarged to well below the gum margin. The entire tooth is coated with adhesive wax, and the enlarged part of the

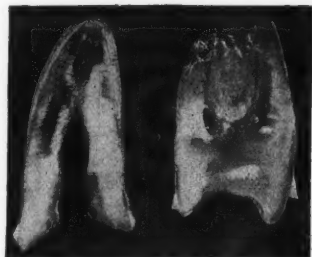


FIG. 23.



FIG. 24.

Showing abscessed roots of children's sixth-year molars. These teeth were firm, but had a history of swelling, and were inflamed at the time of extraction

canal is filled with it. With a cold wet instrument the wax is punctured in a line with the apical end of the root-canal. The canal is cleaned with a barbed broach and the silver solutions applied. After treatment the apical portion of the root is filled by any method chosen, any remaining silver being wiped out, and the wax removed. This prevents discoloration of the lower part of the canal or the crown. It is best to practise this procedure in the laboratory before trying it on the patient.

TOLERANCE OF THE TISSUES FOR THE SILVER SOLUTION

Another question that arises is that of tissue tolerance. It is a well-known fact that silver in its metallic form has been used in different parts of the body, and that it is tolerated by the tissues. We have shown that when it is passed outside of the apical foramen it has not increased inflammation, but allayed it.

We have in our collection a molar that is dark with silver stain throughout its entire root substance! This tooth was firm in its socket, a piece of alveolus being removed with it in its extraction. The tissues around it were pink and healthy. The majority of the remaining teeth were loose and diseased, and for this reason were removed. One occasionally sees a tooth filled with coin amalgam that has outlasted modern work.

Silver nitrate has long been used in dentistry to allay sensitiveness and to arrest decay. It has been used electrolytically in abscess treatment. Doctor Prinz's book contains an excellent exposition of the subject. Silver tartrate and silver citrate have been recommended for wound treatment. Dilute silver nitrate is used for an eyewash for infants.

Argyrol is of wide use. It is reasonable to conclude that silver is not only tolerated by the tissues, but that it is a valuable therapeutic agent. In presenting this method of sterilizing and at the same time impregnating affected dentinal tissue, we wish to state that we still consider the work experimental. Whether it is original or not is a matter of no moment. So far as we know it is, and we believe it is founded on sound principles. If it is ever good practice to sterilize and fill tooth tissue it may be done in this manner simply, effectively, and perfectly.

We do not hesitate to recommend it for trial. It is natural to expect some failures, particularly until the technique is mastered. In the hands of the dental practitioner this will be readily accomplished, and undoubtedly many helpful suggestions will be made.

If there is anything to be added in the way of caution in the employment of this method, it is to remember the distinction between dentinal tissue and the cellular tissue beyond the root-end. While the silver does no harm in the diseased cellular tissue, and is indeed beneficial, it is at times slightly irritating for a short period. On the whole, we believe that it is the best practice first to use Dakin's solution in this tissue, and confine the action of the silver solution to the dentinal tissue as much as possible. Should this not prove effective, work the silver solution directly into the abscessed tissue. No serous discharge ever follows. The tooth is always dry, and it is sterile. A little experience and a little judgment are all that is necessary.

PRELIMINARY REPORT OF CASES

The following is a preliminary report of cases by Doctor Burke. He has many other cases he has treated, which he will make the subject of a subsequent report. Many more are being daily treated in this manner by other operators in our clinic, an account of which will be given later.



A



B

Case 1

Case 1. Lower right first molar. Pulp had died under an amalgam filling. There was considerable pain and some swelling, the X-ray showing an abscessed area at the apices of the roots. (See A.)

Ammoniacal silver nitrate and formalin were applied in the canals, and cultures taken from the canals, which showed no growth. The tooth was then sealed up with cotton and gutta-percha. The X-ray showed a deposit of metallic silver along the walls of the canals and the pulp chamber. (See B.)

The treatment was repeated one week later; there had been no pain after the first sitting, and the swelling was reduced.



A



B



C

Case 2.

Case 2. Lower right first molar. Patient eleven years of age. X-ray taken before treatment, June 8, 1917. (See A.)

The mesial canals were putrescent; the pulp in the distal canal was vital, with a history of pain. Ammoniacal silver nitrate in solution was introduced into the canals, pumped down with a smooth broach, and reduced with formalin. The tooth was sealed with gutta-percha.

On June 22d, patient returned for further treatment. There had been no pain or odor. The treatment was repeated.

On June 29th, an X-ray (see B) was made before filling the canals, showing deposit of metallic silver along the walls of the canal and the pulp chamber. The canals were filled with zinc oxid, aristol, and eugenol solution, plus gutta-percha points.

On July 6th, an X-ray (see C) showed the canals filled.

Case 3. Upper right first bicuspid—X-ray taken before treatment (See A)—containing a putrescent pulp, with a very foul odor.

One or two drops of the silver nitrate solution were applied in the pulp chamber of the tooth, and gently worked into the canals with a smooth broach. One drop of a 25-per-cent. solution of formalin was then added to reduce the silver nitrate.

A radiograph (B) shows the deposit of the metallic silver along the walls of the pulp chamber and root canals.

Cultures taken from the dentin of the canals showed no growth.

A radiograph (C) shows the canals filled.

Case 4. Lower right first molar, in which an attempt had been made to remove the pulp with novocain at some previous time. I found the mesial canals putrescent and the pulp in the distal canal vital.



A



B



C

Case 3.

Silver nitrate was introduced into the canals by applying a drop or two in the pulp chamber and then working it into the canals with a smooth broach. This solution was reduced in the tooth by adding one drop of a 25-per-cent. formalin solution.

The canals were then filled with a paste of zinc oxid, aristol, and eugenol, and gutta-percha points.

Case 5. A lower left second molar in which the pulp had died under an old copper amalgam filling. There was the usual foul odor accompanying such a condition.

The solution of silver nitrate was introduced into the canals, and reduced with the solution of formalin, and the tooth sealed with sterile cotton and gutta-percha.

Case 6. Lower left first molar of a patient twelve years of age. A radiograph (see A) shows the case before treatment, June 2, 1917. There was present a putrescent pulp with history of pain and swelling.



A



B

Case 6.

An ammoniacal solution of silver nitrate was introduced into the canal, pumped down with a smooth broach, and reduced with a 25-per-cent. solution of formalin.

The tooth was sealed with cotton and gutta-percha. A radiograph taken June 9th, (see B) shows the deposit of the metallic silver along the walls of the canals and pulp chamber. Cultures taken from the canals were negative.

The canals were filled with a paste of zinc oxid, eugenol and aristol, plus gutta-percha points.

Case 7. A lower first molar which had previously been treated with phenol and formocresol, etc., but finally presented with a slightly foul odor.

Silver nitrate and formalin were applied in the canals and cultures taken were negative. They were immediately filled with zinc oxid, aristol, and eugenol paste, plus gutta-percha points, with no subsequent trouble.

Case 8. Upper left first molar which had abscessed and was loose and aching, with considerable swelling.

Silver nitrate and formalin were applied. The tooth was so sore that it was impossible to apply the rubber dam. The patient returned the next day, when the swelling was still present, though no pain accompanied it.

The tooth was again treated with formalin and silver nitrate and sealed up with cotton and gutta-percha. The patient presented herself three days later, at which time the swelling was completely reduced and there was no pain; tooth firm.

The tooth was examined two months later. The gum about the tooth was pink and healthy, the tooth firm, and there had been no pain or discomfort since the treatment.

Case 9. A lower right first molar which had been long treated and was very uncomfortable to the patient. Examination showed hypertrophied pulp tissue filling all the canals. Ammoniacal silver nitrate solution was gently worked into the canals and reduced with formalin. As the hour was late, a filling of zinc oxid and eugenol was inserted, and patient seen on the following morning. No vital pulp in any of the canals; tooth dry and sterile. This tooth was then filled in the usual manner, with no subsequent trouble.

Case 10. A lower left first molar with vital pulp left in the root tips after attempted removal under conductive anesthesia. This tooth had been a source of discomfort to the patient for three months. The tooth was treated according to the method described and filled at once, with no further trouble.—*The Dental Cosmos.*

10 EXETER ST.

A CORRECTION

In the December issue of the DENTAL DIGEST, page 776, illustration 5, the figures were reversed and also transposed. Figure 1 should be Figure 2 and Figure 2 should be Figure 1, and as the illustrations are of upper models the cuts should be reversed, showing the ridge directed downward. We regret the error since the cuts as presented show exactly opposite conditions from what was intended, but if readers will refer to the article and put "reverse English" on the cuts, not the captions, the intention of the illustration will be apparent.



FUTURE EVENTS

February 13, 14, 15, 1918.—Twelfth Annual Meeting of Marquette University Dental Alumni Association will be held in the Auditorium, Milwaukee.—DR. V. A. SMITH, 755 Second St., Milwaukee, Wis., *Secretary*.

February 23, 1918.—Dedication of the new dental building of the College of Dentistry, State University of Iowa, and College of Dentistry Clinic, Iowa City, Iowa.—R. R. DEKRUIF, Des Moines, Iowa, *Secretary*.

March 12, 1918.—The Fox River Valley Dental Society. Fifteenth annual meeting at Oshkosh, Wisc.—R. J. CHADY, Oshkosh, Wis., *Secretary*.

March 20, 21, 22, 1918.—The Forty-Second Annual Meeting of the Vermont State Dental Society will be held at the New Sherwood Hotel, Burlington, Vermont.—PHILIP E. MELLE, *Secretary*.

April 1, 2, 3.—The 53rd Annual Meeting of the Missouri State Dental Association will be held at Columbia, Missouri. A splendid program is in preparation and great things may be expected.—J. F. WALLACE, Canton, Missouri, *Secretary*.

April 8-13, 1918.—The sixty-second annual meeting of the Michigan State Dental Society will be held at the Hotel Statler, Detroit. The regular meeting will be held on April 8-9, with a splendid program. The remainder of the week will be a Post Graduate Meeting in charge of the Detroit Club Clinic, at which every important branch of dentistry will be covered.—C. G. BATES, Durand, Mich., *Secretary*.

April 9 and 10, 1918.—The Thirty-seventh Annual Meeting of the Odontological Society of Western Pennsylvania will be held in the Hotel Chatam, Penn Avenue and Fourth Street, Pittsburgh, Pa., Tuesday and Wednesday.—DR. KING S. PERRY, Jenkins Bldg., Pittsburgh, Pa., *Secretary*.

April 10-12, 1918.—West Virginia State Dental Society, Huntington, West Va.

April 11-12, 1918.—The Thirty-eighth Annual Convention of the Texas State Dental Society, San Antonio, Texas.—J. G. FIFE, 736 Wilson Bldg., Dallas, Texas, *Secretary*.

April 11-13, 1918.—Michigan State Dental Society, Detroit, Mich.

April 15-17, 1918.—Kansas State Dental Society, Topeka, Kansas.

April 18-20, 1918.—Connecticut State Dental Association, Hotel Taft, New Haven, Conn.—GEO. S. B. LEONARD, *Secretary*.

April 23, 24, 25, 26, 1918.—The Golden Anniversary Meeting of the Pennsylvania State Dental Society will be held in Wilkes-Barre. Excellent talent has been secured for this occasion and the program extended to a four days' session. To judge by preliminary reports of committees, this event promises to be the greatest meeting in the history of this organization. All ethical practitioners are cordially invited to be present.—J. F. BIDDLE, *Secretary*.

April 25-27, 1918.—The Virginia State Dental Association, Roanoke, Va.—F. R. TALLEY, *Corresponding Secretary*.